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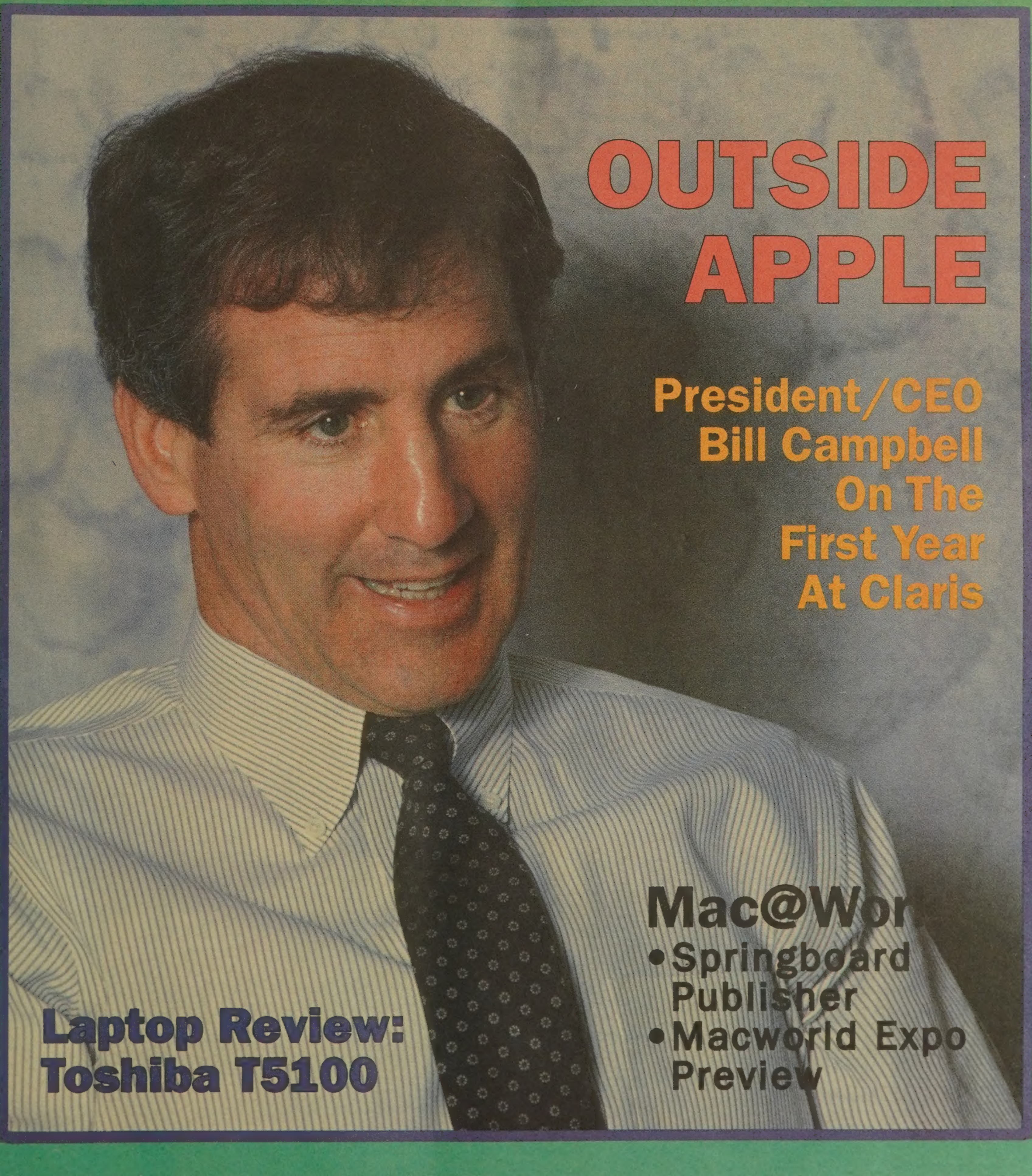

OUTSIDE APPLE

President/CEO Bill Campbell On The First Year At Claris

Mac@Work
- Springboard Publisher
- Macworld Expo Preview

Laptop Review: Toshiba T5100

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Outside Apple

Bill Campbell
On The First Year At Claris

By Mary Eisenhart

Formed last year when Apple decided to get out of the applications software business, Claris has grown and matured considerably in its first year of existence. In this interview, president/CEO Bill Campbell talks about the company's startup days and plans for the future.

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Doug Engelbart

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For desktop publishing on a budget, this simple-to-use program offers some surprisingly sophisticated features.

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The Toshiba T5100

By Jeff Spurrier

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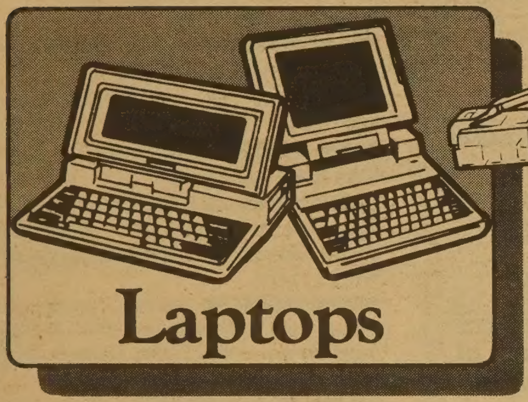

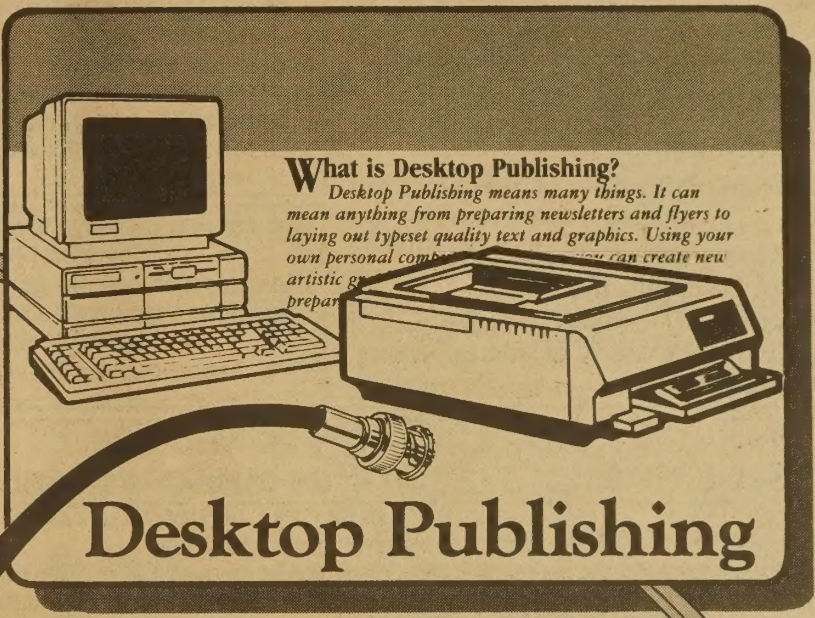
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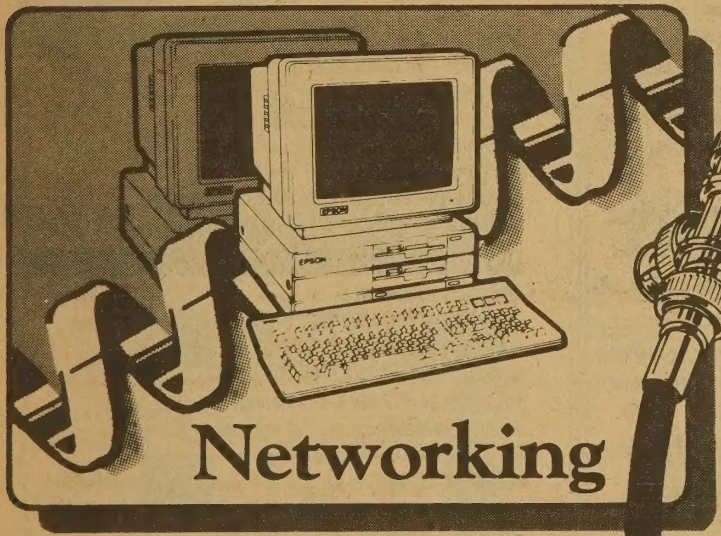

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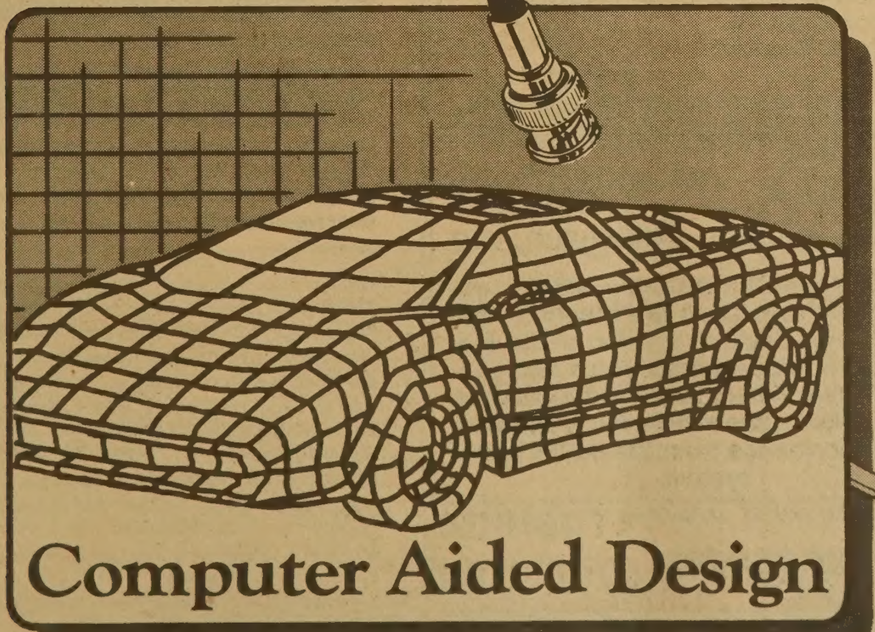

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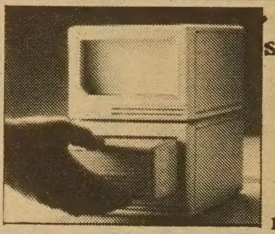

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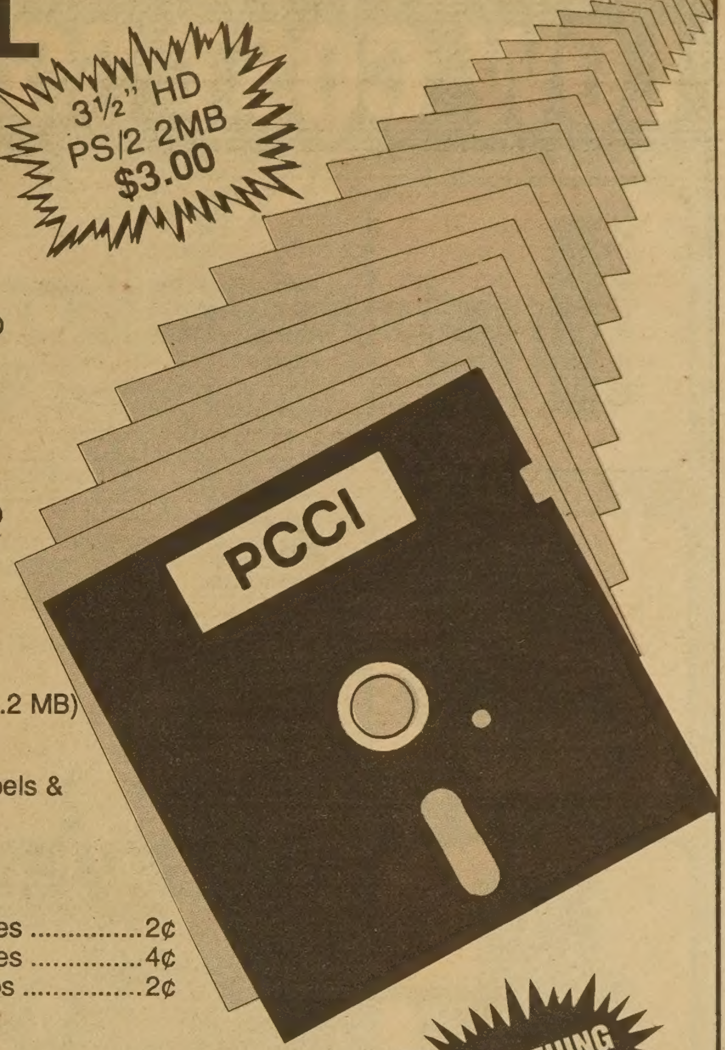

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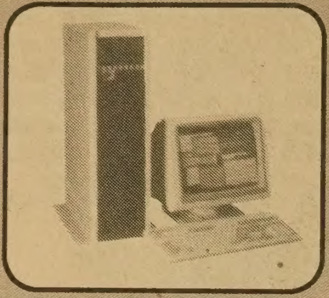

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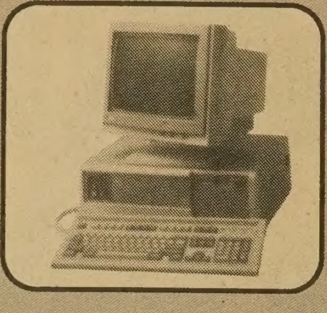

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January 7 Shop Till Ya Drop Computer Swap. Anaheim. Microshows. Call: 1-800- 433-7469.

January 8 Computer Show And Sale. Oxnard. East-West Computer Shows. Call: (415) 388-8893.

January 10 Macintosh SIG Meeting. Cupertino. Software Entrepreneurs' Forum. Call: Tony Meadow, (415) 644-9400.

January 11-13 SC Global '89. San Francisco. Superconductor Applications Association. Call: (714) 586-8727.

January 12 IBM Technical SIG Meeting. Palo Alto. Software Entrepreneurs' Forum. Call: Mike Schmidt, (408) 244-6826.

January 15 Glendale Computer Show & Sale. Glendale. East-West Computer Shows. Call: (415) 388-8893.

January 15 Computer Show And Sale. Antelope Valley. East-West Computer Shows. Call: (415) 388-8893.

January 17-19 The 5th Annual Computer Graphics New York Show. New York. Exhibition Marketing & Management Co. Call: (703) 893-4545.

January 17 Javelin Intro. Seminar. Los Angeles. Mentor Technologies. Call: 1-800- 227-5502.

January 17-19 RISC Systems Architecture And Design Short Course. Los Angeles. UCLA. Call: (213) 825-1047

January 17 MacValley Users Group Meeting. Burbank. MacValley Users Group. Call: David Lagerson, (818) 998-5546.

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January 18 Javelin Advanced Seminar. Los Angeles. Mentor Technologies. Call: 1-800-227-5502.

January 18-20 Reliable Knowledge-Based Systems: Design, Analysis And Testing Short Course. Los Angeles. UCLA. Call: (213) 825-1047

January 19-22 MacWorld Expo. Brooks Hall, Moscone Center, San Francisco. Macworld Magazine. Call: (617) 329-7466.

January 19 SEF Meeting. Palo Alto. Software Entrepreneurs' Forum. Call: Barbara Cass, (415) 854-7219.

January 21 Shop Till Ya Drop Computer Swap. CSU, Northridge. Microshows. Call: 1-800-433-7469.

January 21 San Diego CUE Software Festival. San Diego. CUE, Inc. Call: June Dodge, (619) 543-9561.

January 23-25 1988 Optical Disk Systems Conference: From The Mail Room To The Board Room. Phoenix, Arizona. CAP International. Call: Kristin Fischer, Conference Coordinator, at (617) 982-9500.

January 26 Marketing SIG Meeting. Palo Alto. Software Entrepreneurs' Forum. Call: (415) 854-7219.

January 30-February 3 USENIX Association Winter 1989 Technical Conference. San Diego. USENIX Association. Call: Donnalyn Frey, (703) 764-9789.

February 1-2 Timeslips III Seminars. Los Angeles. Mentor Technologies. Call: 1-800-227-5502

February 2 San Diego Computer Show & Sale. San Diego. East-West Computer Shows. Call: (415) 388-8893.

February 3-4 3rd West Coast Logo Conference, Hands-On Technology Conference And Workshop. Los Angeles. CUE, Inc. Contact: Hands-On Logo Conference, Pepperdine Univ., 400 Corporate Pointe, Culver City, CA 90230.

February 5-7 SAFECON-Software And Firmware CONference. San Jose. MultiDynamics, Inc. Call: Anne Weber, (714) 669-1201.

February 5 Computer Show And Sale. San Diego. East-West Computer Shows. Call: (415) 388-8893.

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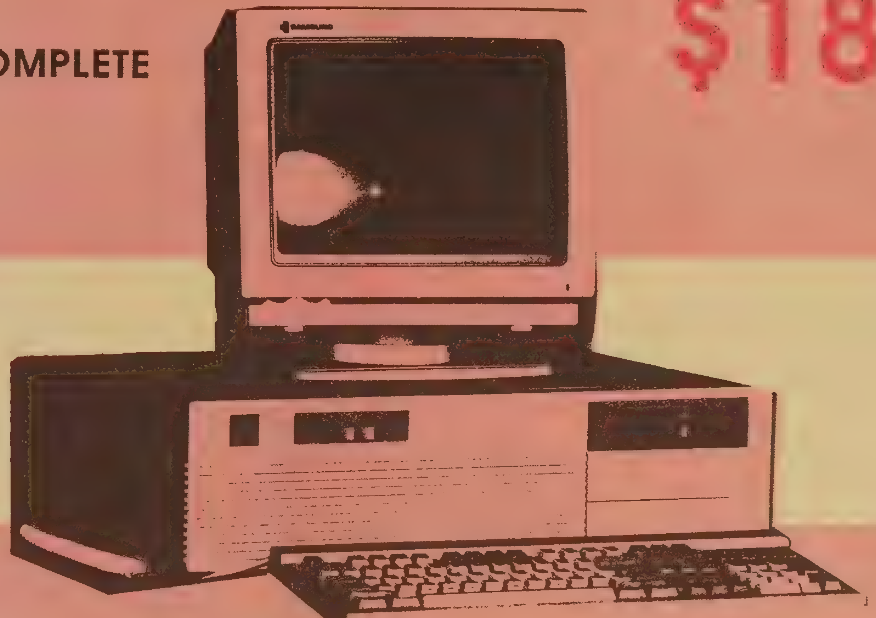

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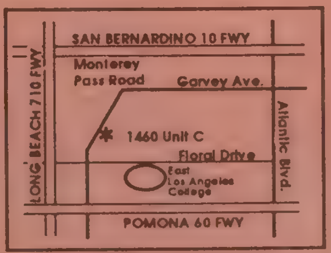

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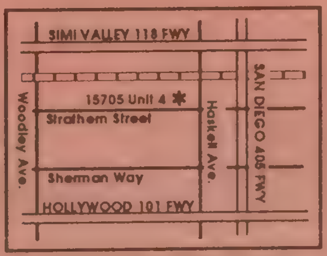

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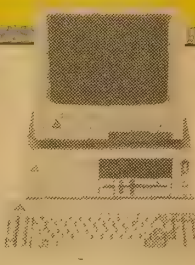

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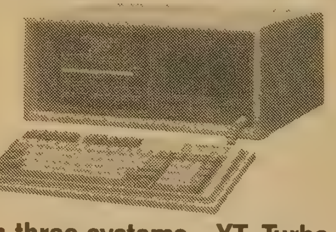

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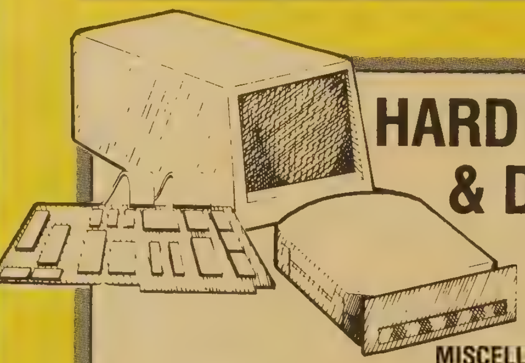

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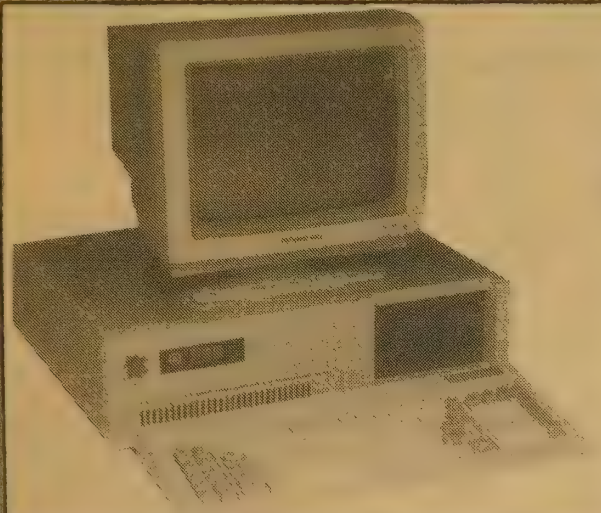

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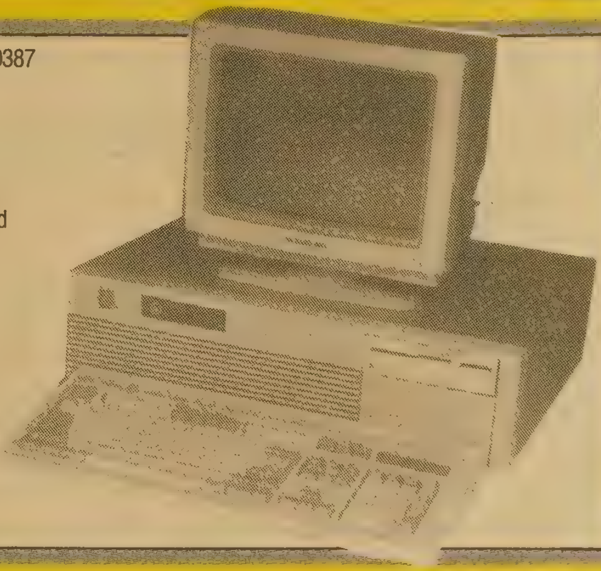

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February 19 Glendale Computer Show & Sale. Glendale. East-West Computer Shows. Call: (415) 388-8893.

February 22 LA 99er Computer Group Meeting. Los Angeles. LA 99er Computer Group. Call: (213) 271-6930.

February 22–23 Consulting Skills For The Information Processing Professional. Los Angeles. Ouellette & Ass. Call: (603) 623-7373.

February 26 Computer Show And Sale. Oxnard. East-West Computer Shows. Call: (415) 388-8893.

February 27-March 3 Modeling And Simulation Of Engineering Systems In The Supercomputer/Minisupercomputer Era Short Course. Los Angeles. UCLA. Call: (213) 825-1047

March 6–9 Folio:West—The 1989 Publishing Conference. Los Angeles. Hanson Publishing Group. Call: (203) 358-9900.

March 13-15 New Technologies: Building On The Fourth Wave Seminar. San Francisco. Seybold Seminars. Call: Kevin Howard, (213) 457-5850.

March 13–15 Novell System Manager Course. Santa Ana. New Horizons Computer Learning Center. Call: James Nakakihara, (714) 556-1220.

March 16-17 Systems Solution For The '90s: Putting The New Technology To Work. San Francisco. Seybold Seminars. Call: (213) 457-5850.

March 17–19 The 14th West Coast Computer Faire. San Francisco. The Interface Group, Inc. Call: (617) 449-6600.

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NEWS
AND ANALYSIS

BY PAUL HOFFMAN

IN THE NEWS . . .

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In a surprising move, long-time IBM veteran William C. Lowe has left Big Blue for Xerox. Paul Hoffman discusses some of the implications for both companies and the industry.

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Paul Hoffman is an industry analyst who has been covering microcomputer technology for ten years. He can be reached on USENET (phoffman@well) and MCI Mail (264-3171). He also writes popular microcomputer books.

Lowe Leaves IBM

Some personnel are easily replaceable, others make such a name for themselves that they leave a gaping hole when they resign. IBM will have to decide which is the case for William Lowe, former head of IBM's Entry Systems Division. Lowe, in a surprise move, resigned from that division and from IBM altogether to join Xerox as executive vice president for planning, development, and manufacturing. IBM replaced Lowe with James Cannavino, who was formerly head of IBM's mainframe division, and split the Entry Systems Division into two parts.

Lowe is generally acknowledged as the main driver behind IBM's PS/2 line. He made it a priority not only to create a new bus for the system, but to position the machine as a powerful workstation system that was an enhancement of, not a replacement for, the original IBM PC line. His leadership of the division did not always bear fruit, however, since the PS/2 line did not produce the profits that IBM had hoped for.

Many industry observers insisted that the PS/2 with the Micro Channel Architecture (MCA) was a burden on IBM that only started to turn around a few months ago. In Lowe's tenure of more than three years in the Entry Systems Division, IBM lost percentage of market share to smaller, cheaper competitors, but was able to keep its most valued clients, namely companies that used IBM mainframe computers.

The prospects for Lowe at Xerox are great. He has a very powerful position that spans almost the entire breadth of the company, and can direct the areas where Xerox will spend most of its extensive research budget. More important, however, he will be able to help bring Xerox and IBM closer through strategic alliances based on his understanding of the people and power at IBM. The timing of his move couldn't be better for Xerox, still floundering in the personal computer market without much real direction.

In the past few years, IBM has been more willing to make deals with competing companies. However, they have recently moved away from making deals for money: instead, they want to trade access to technologies that they cannot produce themselves. This strategy has been one of the biggest stumbling blocks for companies trying to produce clones with the MCA bus, since few clone companies have any technology in which IBM is interested.

Xerox, on the other hand, is much stronger in technology than almost any other diversified computer company, so they have much more with which to deal with IBM. Lowe, then, will be able to keep his old friends at IBM happy by making deals with them for Xerox's extensive portfolio of patents, processes, and manufacturing technology. This will also, of course, please his cohorts at Xerox, since the company never gets much respect for its advanced technology. By being at the intersection of the two companies, Lowe will be able to orchestrate the advancement of Xerox at the same time he is helping IBM.

In a related move, IBM split off the workstation products from the Entry Systems Group. This is mostly due to the poor domestic sales of the workstation products, especially the IBM PC-RT, a RISC-based system. This move certainly does not kill off the products, however, since many of the workstations are popular overseas. Cannavino will be able to focus his efforts on a single line of products and have better control over the direction of the division without the workstation group having to tag along on new announcements.

IBM Sells Rolm to Siemens

Admitting that they lost hundreds of millions of dollars on their purchase of Rolm four years ago, IBM sold the telecommunications division to Siemens, the German giant which already has a very strong foothold in the telecommunications market. The sale gives Siemens the Rolm research and development departments and a guarantee from IBM that IBM will not try to develop a telecommunications system in Europe. IBM and Siemens will split the marketing and services of Rolm-developed products in the US.

One of the major reasons that Rolm failed for IBM is that Rolm workers and management always had a very independent attitude that helped form the company image. In its four years as an IBM subsidiary, morale at Rolm plummeted, taking sales and major development with it. Many Rolm workers feel that the sale to Siemens, a much less bureaucratic organization than IBM, will help restore morale.

Fox Countersues Ashton-Tate

Fox Software responded to Ashton-Tate's lawsuit with a countersuit that may prove very embarrassing to Ashton-Tate and will certainly embroil the two companies in litigation for years to come.

Earlier, Ashton-Tate sued Fox for infringing on their copyrights since *FoxBase+* looks very similar to *dBASE III* and *dBASE IV*. Fox's countersuit not only refutes the charges in the original suit but claims that Ashton-Tate stole many features that it added to *dBASE IV* when it examined Fox's source code during discussions that were supposedly aimed at Ashton-Tate purchasing Fox. If that allegation is upheld in court, Ashton-Tate will probably become the laughingstock of the software industry for bringing up the original suit when it was so vulnerable to a countersuit and will probably generate a tremendous amount of favorable publicity for

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NEWS AND ANALYSIS

Epyx Successfully Defends Copyright Suit

The scope of look-and-feel lawsuits was narrowed by a decision in the Ninth Circuit Court that denied Data East exclusive copyright to karate-type games.

Data East claimed that Epyx's *World Karate Championship* infringed on its *Karate Champ* game even though there were many differences in the way that the games were presented and played. Data East was supported by a lower court ruling, but lost on Epyx's appeal.

The ruling made it clear that there had to be a very substantial overlap in the way that computer games (and probably business software) acted and appeared before a copyright suit could be brought.

FoxBase+.

Fox's response to Ashton-Tate takes on Ashton-Tate in many areas: Fox claims that, although *FoxBase+* is compatible with *dBASE*, it does not use the same look and feel. Specifically, Fox says that the many additional features (including additional commands, utility programs) and the overall faster execution speed make *FoxBase+* look and feel very different from *dBASE*. This is the first major case to bring speed of execution into the "feel" part of the now-infamous look-and-feel suits.

Since it is widely known that *dBASE II* was based on a public-domain database language, Fox claims that Ashton-Tate has no look-and-feel copyright on the product. *dBASE II* was originally developed at the Jet Propulsion Laboratory in Pasadena as JPLDIS, as its original inventors have since pointed out on many occasions. As Ashton-Tate released new versions of *dBASE*, it copied features from other programs. Fox claims that this invalidates Ashton-Tate's look-and-feel copyright and therefore makes their claim against Fox empty.

Fox claims that Ashton-Tate has encouraged other companies to create *dBASE*-compatible languages. Certainly, it has never done anything to discourage them. In fact, it has openly invited manufacturers including Fox to dBASE developers' conferences and used them as proof of the power of the dBASE language. Fox uses the legal theories of *estoppel* (Ashton-Tate's earlier encouragement of Fox to develop *FoxBase+* inhibits their ability to later claim damages) and *laches* (long-neglected rights cannot later be enforced) to defend itself at this late stage in the development of the *dBASE*-compatible market.

No one has ever copyrighted a computer language. Ashton-Tate's claim on the language is probably a gesture at being all-expansive in their suit, but it may come back to haunt them, since almost everyone who has commented on the case has pointed out Ashton-Tate's folly on this point.

Fox claims that Ashton-Tate neglected to mention that *dBASE II* was based on JPLDIS in its copyright registration and therefore committed fraud. Fox says that Ashton-Tate can't claim to not know about the origin of *dBASE* since it employed the people who developed it at JPL.

Fox further claims that Ashton-Tate tricked Fox into showing its source code, and incorporated some of it into *dBASE IV*. The suit states: "Between November, 1986 and March, 1987, Ashton-Tate, on the pretense of acquiring *FoxBASE+*, induced Fox and Dave Fulton to provide Ashton-Tate with details of the proprietary, secret structure and algorithms used in *FoxBASE+*. Ashton-Tate willfully misappropriated some or all of the proprietary, secret structures and algorithms which were disclosed in confidence and has incorporated them into its latest release, *dBASE IV*."

Due to this alleged theft of secrets, Fox asks for damages from Ashton-Tate. Further, they claim that Ashton-Tate is attempting to monopolize the PC database market by fraudulently obtaining copyrights, inducing companies to disclose programming secrets, and threatening groundless litigation.

This litigation has brought out an interesting new twist to lawsuits in the micro industry. Both Ashton-Tate and Fox accompanied their claims not only with press releases but with "open letters" to the software industry, each defending their points of view. These letters cover the larger copyright issues, but go further by attempting to line up software vendors on one side of the case before it has even been presented to the judge. It is not clear whether the letter-writers want to get companies to write friend-of-the-court briefs in their favor or simply to try to keep friends during the long course of litigation.

It appears that Ashton-Tate predicted the backlash against it for the suit and tried to stem the tide with the open letter, and that Fox tried to capitalize on this sentiment in their letter. Fox also used their open letter to present some of their evidence before the case was heard.

Open Software Foundation Breaks Off Talks with AT&T

Claiming that AT&T was intractable on major issues, the president of the Open Software Foundation (OSF) announced that OSF had broken off talks with the giant owner of UNIX and reaffirmed its selection of IBM's AIX-3 as the base for OSF development.

According to a letter sent to OSF members and the press, "The central obstacle to AT&T's joining OSF is its insistence that the OSF Board of Directors mandate System V Release 4 in its entirety as OSF/1, rather than permitting users to select the best available technologies through the open process." The letter also said, "Although we remain open to further discussions, I assure you that we have no intention of allowing these, or any other activities, to impact our commitment to you to deliver a complete open software platform by the end of 1989."

The letter went on to restate the advantages of AIX-3 over AT&T's UNIX, emphasizing that current System V applications will be fully supported under the first version of the OSF operating system, OSF/1. It also stated that OSF/1 will contain "streams" similar to System V and will be compatible with Berkeley 4.3BSD.

Open Token Foundation Formed

Hoping to make it easier for networking boards from different manufacturers to communicate, 23 companies banded to form the Open Token Foundation. The OTF will promote interoperability between token-ring products from many manufacturers. Even though the token ring has been standardized by the IEEE as standard 802.5, many companies have expressed fear that advances may go faster than the standard and chaos would result.

IBM did not join the foundation immediately, but made it clear that it was considering joining as a way to promote the token-ring technology it invented. However, even without IBM, the OTF will be able to help standardize many open areas of the standard and push token-ring forward as a major networking technology.

COMDEX '88 Report:

They Left the Blender On Too Long

Very little has changed in the computer industry in the last year. At last year's COMDEX (the annual gathering of the computer industry faithful in Las Vegas), the oft-heard forlorn question was "What have you seen that was exciting?" This year creeping homogeneity in the industry, combined with rampant confusion on the part of users, reached a new high, and the most-asked question became "Have you seen *anything* exciting yet?" All too often, the answer was no.

Even the attempts at creating the illusion of excitement failed, as **Microsoft** and **IBM** attempted to make it seem like every hardware and software manufacturer was just thrilled with **OS/2**. Signs in almost every aisle pointed towards companies who were "supporting" OS/2. Closer inspection, however, revealed that few of the manufacturers who were running the new operating system had any intention of pushing it, citing their fear of the high cost of support and of the huge amount of still-expensive memory that must be sold with it in order for it to run. Likewise, the few software manufactur-

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ers who had real OS/2 products or would have them within the next few months were very subdued in their glee over the new operating system. Only those who had announced that their products were a year or more away seemed to think that OS/2 would help out users.

One factor that dampened the enthusiasm for OS/2 is that Microsoft's estimates of how much faster OS/2 programs would run were optimistic, at best. According to Microsoft, database management systems and other software that access the disk often showed good improvement due to the better file system designed into OS/2 but still lacking in MS-DOS, even version 4. However, programs that are large and memory intensive (such as the new OS/2 version of *Agenda* from Lotus) run slower under OS/2 than under MS-DOS. Since very few popular programs run under OS/2 yet, many developers are worried about how important many of the features of the operating system will be. Microsoft also showed its OS/2 LAN Manager software interacting with IBM's OS/2 LAN Server. It also announced that its joint project with Ashton-Tate to develop a database server was behind schedule and would not ship until the middle of next year.

For its part, **IBM** seemed terribly upbeat. Shipments of its **PS/2** line are doing very well, although it admitted that it had supply problems to some dealers during the year. In order to make it seem like software vendors were streaming toward OS/2, it released a list of 800 applications that run under OS/2. Closer inspection revealed that most of them required the RPG II Application Platform, which is only available for IBM systems, not for general OS/2 users. Even then, more than half of the programs in the list were not going to be available for more than six months. IBM also announced that it will meet its deadline by shipping OS/2 LAN Server and Extended Edition 1.1 (with Presentation Manager) by the end of November. It also announced two new faster dot-matrix printers. Separately, **Borland** announced that it would bundle its SideKick for OS/2 with IBM's OS/2 for a limited time.

Microsoft also announced that it has created a user interface for **UNIX** that is similar to its Presentation Manager interface for *Windows* and OS/2. The **Common X Interface (CXI)** was codeveloped with **Hewlett-Packard**. CXI allows UNIX software developers to create software that looks and feels like software that runs on the PC. The new standard requires the UNIX hardware to support graphics and the X Window System. The system will be available late next year.

Probably the most interesting product on display at COMDEX was not available for sale and would not be available for a year. **Private Eye** from **Reflection Technology** is a tiny computer monitor that can be worn on a headset or pair of glasses. It is 1" x 1.2" x 3.2" and has a resolution of 720 by 280 pixels. The image on the screen is as clear as a regular PC monitor. The tiny screen allows users to have a screen in front of part of one eye, leaving the rest of the field of vision free. Reflection Technology will

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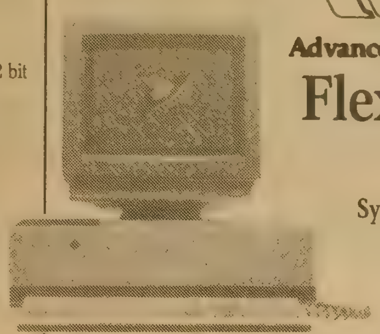

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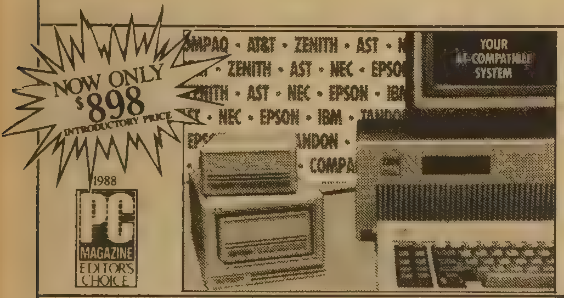

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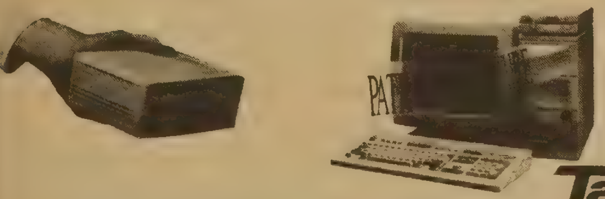

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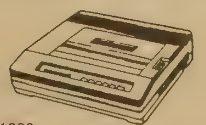

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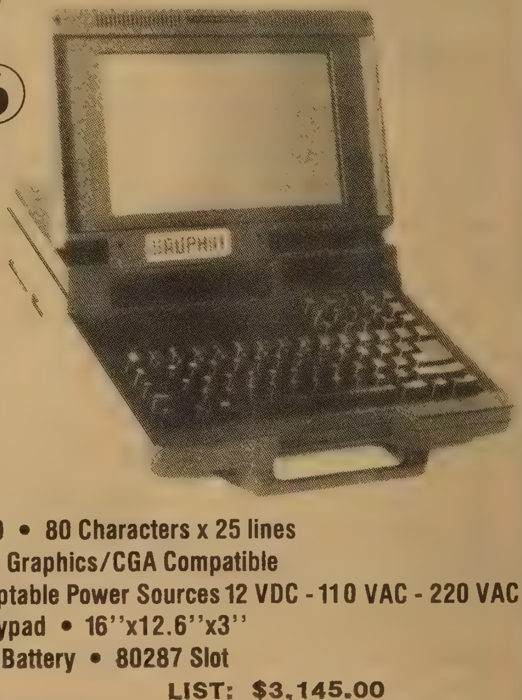

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PAC-286 FEATURES:
- Available in 8 or 10 MHz configurations
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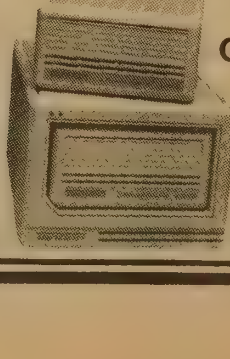

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As always, there were dozens of new IBM PC clones introduced at this year's show. Many companies showed new systems with fast 80386 and 80386 SX CPUs, and many others showed new laptops in a wide variety of power. Laptops with hard disks have gotten lighter, and high-end clones have gotten faster. NEC's new **UltraLite** won the sweepstakes for the thinnest, lightest portable (8.3" x 11.75" x 1.4", 4.4 pounds).

Other Announcements: General

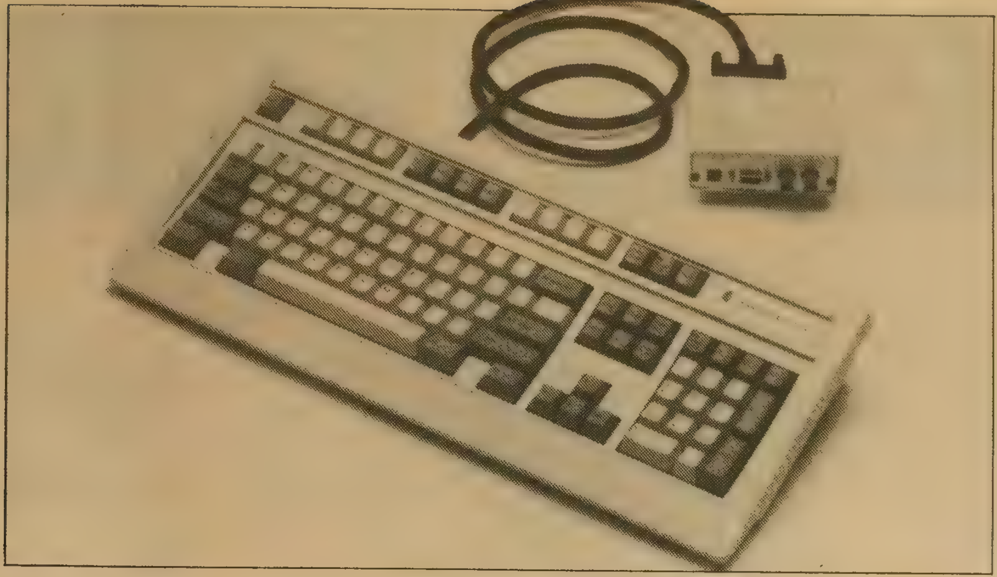
- Reference Software showed its new *PowerPack* for its best-selling *Grammatik III* grammar and style checking software package. The *Power Pack*, which costs $49, makes *Grammatik III* RAM-resident, allows you to edit the writing styles checked in the software, and adds "reading level" statistics.

- Samna introduced the first major word processor for Microsoft *Windows, Ami*. The package supports style sheets which allow the user to give formatting commands for general types of paragraphs. It supports a fast text-only mode and a what-you-see-is-what-you-get layout mode. *Ami* comes with a spelling checker, advanced desktop publishing features like kerning and snaking columns, and can use graphics from other *Windows* applications. It costs $199. Samna will offer another package, *Ami Professional*, that has all of *Ami*'s features plus a thesaurus, merged documents, and tables.

- COMDEX isn't all hardware and software. Many vendors show computer furniture, supplies, and so on. One new product that also boasts "desktop capabilities" is a fire-proof safe for your backup floppies and tapes. The Fire-Safe Media file from Sentry Safes holds over 100 diskettes or 50 backup tapes. It maintains an interior temperature below 100 degrees even after a half hour of being in a 1500 degree fire. The Fire-Safe also has a key lock for prevention of theft.

- XTree announced versions of the *XTree* file management program for the Macintosh and Novell LANs. *XTree* is a popular program that helps you see the structure of the directories on your disk and to move and organize files. The new packages have many of the same features of the the PC version. *XTree/Mac* costs $99 and *XTreeNet* costs $395.

- Softbridge Microsystems introduced Bridge/386, an interactive language for creating multitasking macro and batch control processes. Bridge/386 lets you write scripts for automatic inter-program communication, such as between a data-capturing program and an analysis program. It works with all standard MS-DOS and *Windows* programs.



The Earthstation-IIe is a compact 286-based diskless workstation.

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NEC P5200 (132 col)	$530	Paper White Mono	$140	Everex 1200 Modem	$80
EPSON Fx 286E (132 col)	$460	DFI Handy Scanner	$250	Everex 2400 Modem	$170

NEC's UltraLite laptop packs AT power into a four-pound portable small enough to fit in a 12" x 9" envelope.

•Now that versions of *WordPerfect* exist on nearly every type of microcomputer, WordPerfect Corporation has branched out into mainframe environments. They announced a new version of *WordPerfect* for IBM 370-class computers running the VM/CMS operating system. *WordPerfect* for the 370 is essentially the same as Version 4.2 for the IBM PC, except that it runs on 3270 terminals and can read and write files in EBCDIC, RFTDCA, and FFTDCA formats. The program looks and feels like an amalgam of classic *WordPerfect* and standard 3270-based programs.

•Hitachi showed two new CD-ROM readers with much faster access times than their previous models. The new readers fit in a half-height slot of a PC and have a random access time of .35 seconds, which is more than twice as fast as most CD-ROM readers. In addition, the new drives have 32K of RAM buffer for better performance and can be mounted either horizontally or vertically, so they work in systems which are turned on their sides.

•Earth Computer Technologies showed a diskless workstation that was no bigger than a standard keyboard. The Earthstation-IIe is an 80286 with 512K, all standard video modes, a 10 megabit Ethernet interface, and a parallel and serial port. It is housed in a standard 101-style keyboard with a small box attached by cable for the Ethernet coax and monitor. It can run with Novell, Network/OS, and NetBIOS-compatible operating systems. Its small size makes it very useful in areas with limited space.

•Information Research introduced *Syzygy*, a new groupware tool for project planning and organization. It allows members of a group to view and add to projects in a hierarchical fashion. *Syzygy* uses Gantt charts as the organizing principle, and can create calendars and to-do lists from the project. It can also be used as a meeting scheduler for departments. It can read and write files compatible with personal information handlers like *Agenda* and

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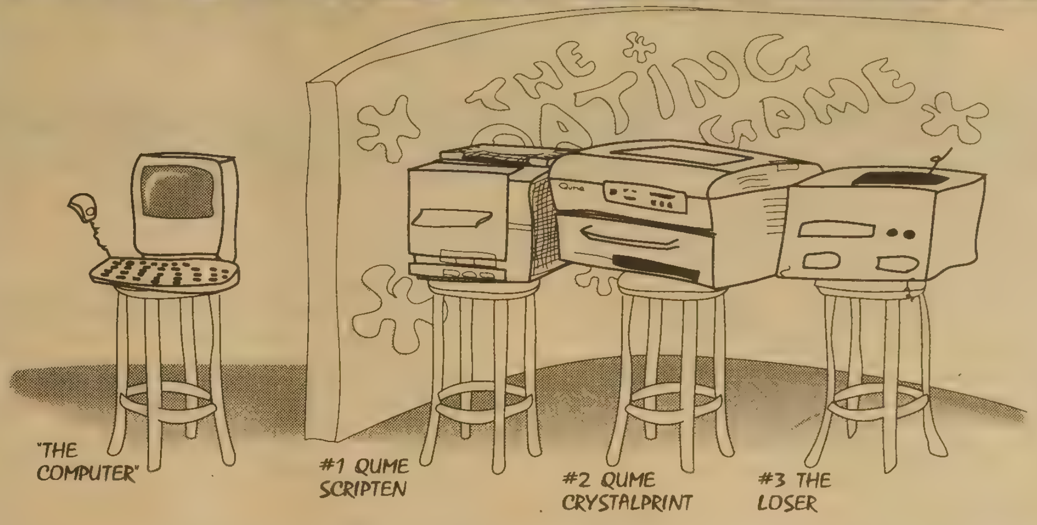

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NEWS
AND ANALYSIS

GrandView. The single-user version costs $395, while the network versions cost $595 for two users, $995 for 3 to 10 users; an unlimited license for one server is $1995.

Fax News

•Ricoh showed a peripheral that allows both computers and fax machines to work more closely together. The DX-1 allows a standard fax machine to work both as a scanner and a printer for any computer. Many offices have fax machines but no scanners, and this gives users a method for scanning documents for graphics or text. Attached to a computer, the DX-1 acts as a standard fax, receiving and sending device at 19,200 baud.

•Touchbase Systems introduced a tiny portable 9600 baud fax/modem combination. The Model 2496 works just like standard PC fax attachments and modems, but it is only 5" x 2.75" x 1". It can also be used with Tandy acoustic couplers, so that you do not need to be near a modular phone to use it. The unit costs $699 and will be available early next year.

•Quadram announced as PS/2 version of its popular JT Fax line. The JT Fax PS/Q board retails for $595 and is one of the first fax boards available for the PS/2.

New Printers

•Tektronix showed the Phaser CP color printer that can be use as both a color PostScript printer or as an HPGL printer. It uses 300 dots-per-inch thermal wax transfer. They also showed the Phaser LP black-and-white system for B-size or tabloid (11" x 17") printing. Each comes with 35 PostScript fonts resident in the controller, the Phaser Card. The controller also works with current Tektronics thermal wax printers. The Phaser CP is $6000, the Phaser LP is $3000, and the Phaser Card is $6995.

•Toshiba introduced a portable 24-pin printer that weighs only four pounds. The ExpressWriter 301 is designed to go with portable computers. It prints in near-letter-quality mode at 42 characters per second and costs $489.

•Genicom announced two printers with 400 dot-per-inch resolution and eight page-per-minute engines. Both emulate the Hewlett-Packard LaserJet II, IBM Graphics Printers, Diablo 630, and include Genicom's ACE page description language. The 6140 has 1 megabyte of RAM and costs $4295; the 6142 has 3 megabytes and costs $4895.

•Mannesmann Tally showed their new MT81 dot matrix printer which costs $199 and prints at 130 characters per second in draft mode. The printer can also produce intermediate-quality printing. They also showed their new MT905 laser printer that is compatible with the Hewlett-Packard LaserJet II but lists for $1995. ■

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We are the stuffed men
Leaning together
Headpiece filled with straw. Alas!
Our dried voices, when
We whisper together
Are quiet and meaningless
As wind in dry grass
Or rats' feet over broken glass
In our dry cellar

"Shape without form, shade without colour,
Paralysed force, gesture without motion..."

–from *The Hollow Men*

by T. S. Eliot

Never having been to a COMDEX, I wondered why the largest of computer trade shows would be held in Las Vegas. Seemed like an odd setting.

Unlike Vegas, computers are magical to me. I think of their development as a kind of holy undertaking. Through them, we might be creating a new form of life. At the least we're redesigning our own minds, gearing up to think, as J.C.R. Licklider put it: "as no human being has ever thought."

They might even be our salvation. I imagine their swift and immense modelings enhancing our ability to perceive the Mysterious Whole rather than its lifeless parts, a perception which may throttle back our planetary abuses in the nick of time. They are turbos for the imagination, psychedelics without fear, windows on the universe. Miracles...or something headed that way.

So why display the fruits of hope in a tarted-out old carny like Las Vegas? To me, Vegas is the compost pit for all the American Dream's toxic byproducts, a place about which even Hunter S. Thompson couldn't speak enough ill. It hardly seems a proper showcase for miracles. But, as I say, I'd never been to a COMDEX. I was about to find out what computers really are.

I am accustomed to the sight of businessmen in transit, but still there was a startling uniformity at the America West gate in Salt Lake City. It was a perfect pond of dark blue, punctuated regularly by Power Tie Red. If there were a hacker present, he wasn't letting it show. Most everyone on Flight 457 had checked in early. They gazed upon my disheveled arrival like basilisks and returned to their *Wall Street Journals.*

The jetway opened and we filed into the aluminum tube. I felt like the answer to "What is wrong with this picture?" My fellow travelers spoke to one another in hushed tones, as though passing by a casket. There was absolutely no laughter.

I began to get a bad feeling about COMDEX.

I took refuge in my own *Wall Street Journal*, which had a special supplement on America's impending technological defeat by the Japanese. It maintained that the former Copycats of the Orient were now beating us at our own game: ideas. There appears to be a widening "creativity gap" both in technological products and production techniques.

For reasons mysterious to the *Journal*, the Japanese were mining veins in American research which American companies were leaving untouched. There was a dreary list of American inventions for which only Japanese companies had shown commercial interest.

Worse, Japanese companies were now leading in American patents. In only five years, the old leaders in annual filing, General Electric, RCA, and IBM, had fallen far behind Canon, Hitachi, and Toshiba. Describing American business attitudes, the authors kept using words like "indifference," "caution," "short-sightedness."

I looked around the cabin. I beheld there some very comfortable faces. In no eye did I detect a glittering lust of adventure.

The 737 swooped down over the jeep-scarred desert and emptied us into a casino. The gate pod at McCarran was filled with one-armed bandits and another silicon boon, video poker machines. The suits sprinted off to wait for taxis in a queue that looked like sirloin day in Minsk, while I settled in to wait for the later arrival of my guide, *MicroTimes* news editor Paul Hoffman.

His appearance calmed me somewhat. Paul, I discovered, is a Deadhead to the soles of his Birkenstocks. He also seemed to appreciate the demonic cackle he inspired in me by pointing out a threatening sign in the terminal corridor: "See ALL of Las Vegas."

If I were about to spend three days with 100,000 BizDroids, at least I would have the company of someone who could appreciate grisly humor, which, it became immediately clear, would be the only form available.

Lunch With Microsoft

We hustled off to the Riviera for lunch on Microsoft. Humor here was officially represented by a mockup of George Bush's inaugural address in Microsoft *Word* 5.0, showing the ease with which our next president could plug in great lines from previous speeches. The press stared holes in their lasagna and chuckled nervously.

One could find unofficial amusement in the fact that, despite the touted maturation of OS/2's Presentation Manager, neither new release of Microsoft's big guns, *Word* and *Excel*, could run under it. No one noted this inconsistency, however, and I got a taste of COMDEX truth, a form which George Orwell would have recognized. It is a state of corporate understanding in which unpleasant realities simply don't exist.

Bill Gates, Microsoft's boy king, is no stranger to carefully sorted disclosure. One such selection made him a billionaire. Gates, whose mother once served on the United Way board with IBM chairman John Opel, found out in 1980 that IBM was looking for an operating system for its developing PC.

As it happened, he had a pal in Seattle named Rod Brock who had just developed a 16 bit operating system called SCP-DOS (for Seattle Computer Products Disk Operating System). Without telling Brock why he wanted it, Gates bought DOS for a sum which it has since returned to him roughly 20,000 times.

Gates took right to the basic fact of the Information Age: the money is made in trade and not creation. Technopeasants write the code. Their suited lords get rich from it. Gates, at the podium, still looked the prototypical hacker, even to the reflexive re-positioning of glasses which no longer slid. Nevertheless, his blandly uncandid portrayal of OS/2's enthusiastic acceptance could only have come from the corporate captain he is.

The Belly Of COMDEX

Paul and I descended from the top of the Riviera into the belly of COMDEX. For different reasons, we were both hoping that at least one of the 1700+ exhibitors would show us something paradigm-warpingly new. He was looking for breakthrough products because it's his job. I was looking because it's my dream.

It was obvious at once that we'd sift a lot of chaff before we'd find the seeds from which any desirable future might grow. There was no shortage of DOS clones so similar as to literally merit the name, or, for that matter, apparently identical disk drives, accounting software packages, databases, laptops, trade mags, networks, printers, boards, mice, modems, and monitors.

I began to wonder how any market could provide niches for so many perfectly redundant products. I'm still wondering about that. But at least the vast barrens of COMDEX made it clear to me who that market is: bureaucrats.

You can call them managers, administrative assistants, or office drones. If you've the stomach for it, you can even call them "knowledge workers." Whatever you call them, they wear a white collar and these are their machines. We're talking personal productivity tools here, mister! We're talking enhanced workplace throughput! We're talking power desktop solutioning!

Nowhere in evidence were such devices as one might use to re-vision the universe or expand consciousness. No, indeed. We're talking conscious-

continued

Rev. John Perry Barlow is a retired rancher, techno-crank, and the "other" lyricist for the Grateful Dead. He takes his ordination more seriously than most Universal Life ministers.

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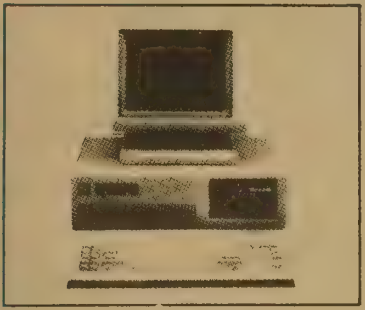

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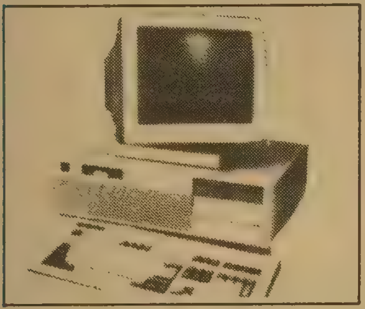
360 KB floppy disk drive	add 65
1.44 MB 3½″ floppy drive (PS 2 comp.)	add 110
ST 251 40 MB hard disk (39 ms)	add 385
ST 251-1 40 MB hard disk (28 ms)	add 425
ST 4096 80 MB hard disk (28 ms)	add 645



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1.44 MB 3½″ floppy disk drive	add 110
VGA upgrade	add 680

XT SYSTEM: $1125

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- 512K RAM on board
- 1 360K floppy drive
- 150 watt power supply
- Monochrome/graphics card
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- Clock/Calendar
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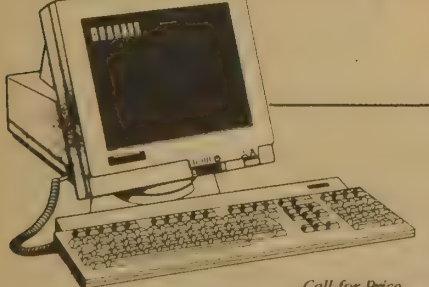

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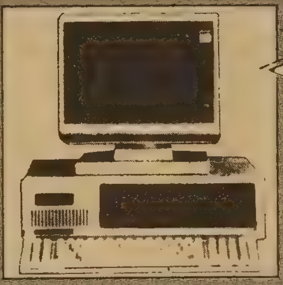

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ness contraction!

Plenty of which had apparently taken place. Take the matter of gender equality. After Paul and I had tramped three or four miles of COMDEX carpeting, I muttered, "Where do they get all these *girls*?"

Paul is from Berkeley and immediately asserted his political correctness with "Don't you mean to say '*women*'?"

I did not mean to say women, my choice of term having been guided by application. These persons, dizzyingly sexy in their short-skirted business suits, were unquestionably being *used* as girls. Or, more precisely, bait. Their employers hovered behind them, trolling the aisles for randy resellers.

Though their badges might indicate a position with Texxcom or PowerWare or whatever, many of them were obviously daylighting from such employment as "Nudes On Ice," and, in fact, I did see one of them well out of her business suit later on.

The marketers would have done better to employ these ladies in their professional capacity. A large number of companies were putting on small theatrical pieces. Given the talent displayed in them, one had to assume that many of the performers really did work for the company on a regular basis and were reviving thespian skills last exhibited in their Junior Class production of *Oklahoma!*

Small computers, rather than restoring individual creation, have become corporate "productivity tools," as much the means of dominating both individuals and information as were mainframes.

Apart from social benightedness, consciousness contraction had worked an intense effect on the nature of the displayed products themselves. It had squeezed most of the imagination out of what made it to this vast venue, a place where ideas should be the chief raw material.

For all the multitude of microcomputers, there are two permissible case colors: beige for the desk and flat black for the lap. You can't judge a box by its color, but it was no different within, where there were two permissible CPUs, the 80286 and the 80386.

Where was the Macintosh? Nowhere and everywhere. Actual Macintoshes were rare indeed. But an observer fresh to the scene would think that something very much like the Macintosh was the hottest news of the year. With the release of Presentation Manager, the graphical interface is at last IN. Never mind that few applications would actually run under PM, Microsoft *Windows* had the look.

The number of of passing moments when I *thought* I was looking at the paper white windows of a Mac screen would certainly bolster Apple's legal case against Microsoft.

We were treated to many demonstrations of the ease of such thrilling new technology as clickable icons, multiple applications running in tiled windows, and other elements of the desktop metaphor. The most shameless of these was IBM's own theatrical extravaganza which breathlessly demonstrated four-year-old technology as though it were tomorrow's.

"If this is so great," I asked Paul, "Why didn't these people go for Macs a long time ago?"

"Didn't know about 'em, I guess. " After all, they weren't IBM technology. And, as is commonly known, no one was ever fired for buying Big Blue.

In others words, the tyranny of job security and consensus. The proper course is the one which won't get you fired. A market as paranoid and conformist as that defined by white collar managers will not exact propel innovation by its hunger for the new. The results of this natural timidity showed all over COMDEX.

That which was innovative was almost invariably both developmental and foreign. Like Nissei Sangyo's optical disk jukebox, a storage device about the size of a Sun CPU into which one could pack a significant percentage of the Library of Congress. Or Sony's DAT tape drive which could store 1.3 gigabytes in a package so small you could probably use body cavities for smuggling it. Or Twix's personal data microwave which, for five grand, will blast your data across town at 19, 200 squeaky clean baud. This product came from those notoriously imaginative folks, the Swiss.

In search of American breakthroughs, Paul and I went to the Hall of Press Kits, a quarter acre of glossy PR. I descended immediately into datashock, stumbling behind Paul, stupid with brain-glaze. Never have I seen so many words say so little. Nor did one detect an endangering level of excitement out in the vast barrens of the exhibit halls. Aside from the dress code, the scene kept reminding me of a suburban mall a couple of days after Thanksgiving. Clutching their bulging and gaily-colored plastic bags, the COMDEX-oids had the look of shoppers in major migration. There was that same uneasy satiety, the same troubled self-absorption, the same utter joylessness.

Which made it a wonderful thing whenever we encountered anyone with the sparkle of actual interest, regardless of how morbid it might be. We fell in with a very alert young physicist from Xerox PARC one evening. He had little good to say about most of what he had seen but at least gave evidence of involvement with it.

The second night we ran into a couple of mathematicians from Autodesk whom I had barely met at the Hackers Conference. In this context, we greeted one another like separated twins. Like the physicist, they told us of The One Truly New Thing. In their description, it had a mythic quality. It would be hard to find...its location was difficult to describe. We would have to look hard.

They were right. We tramped the backwaters of the Hilton Exhibit Hall for hours before coming on it. There it was: the magic eyepiece, The Private Eye. The invention of a fellow from Cambridge named Al Becker, it provides the first heads-up display for people who are not flying supersonic killer jets. Hanging from a headset about two inches from one's left cheekbone, the tiny screen projects a virtual display into the middle distance. With it, you could probably operate a computer while doing about anything short of sleeping or making love.

The potential applications of this gizmo are limited only by the imagination, but, at the very least, it looks like a good way of getting people out of the office. Interestingly, Becker created it without any application in mind, hoping to inspire rather than meet the expectations of a market.

He had come to COMDEX in search of 100 people or companies who could imagine a truly interesting use for it. If you came up with a good idea, you would get a development prototype for next to nothing. If you didn't, you could be IBM and you still wouldn't get one.

Becker clearly had a unique sense of what he was doing. He had previously co-founded a couple of companies, Kurzweil and Cadmus, from each of which he had taken leave as soon as they became institutions. He actually seemed to like making ideas happen as much as he liked making money.

If there were more people in the computer business like Al Becker, COMDEX would be a very different experience.

Breakfast With Big Blue

Dawns my second day at COMDEX. Out on Convention Center Way, the suits are streaming eastward toward the hovering saucer of the Convention Center as though returning to the Mother Ship. This vision, combined with their regularity of gait and dispassion of expression, wedges me right into a remake of *Invasion of the Body Snatchers* before I've even had a chance to wake up.

I'm starting to feel what Dr. Thompson called "bad craziness." In the hope of restoring internal order as well as lowering my profile, I put on a tie. We are, after all, going to the IBM breakfast. Where craziness of whatever sort will be about as welcome as anti-matter.

By some miracle, we get a cab to the Tropicana. There IBM has rented for us a breakfast nook only a little larger than a football field. As the soon as the guards admit the gathered hordes, a sound system the wattage of which approximates the Grateful Dead's starts lathering us with synth-pop at a decibel level guaranteed to eliminate idle chatter.

This continues through breakfast. Which is a pity since I really want to hear what the IBM employees at our table are shouting at each other. Close up, they don't seem so much like cyborgs. I want to know them as humans.

Finally the Main Event begins. The lights are doused, the "music" swells, and suddenly the room is a cat's cradle of stabbing laser beams. To my complete astonishment, staid old IBM then puts on a *son et lumiére* display which would have caused a less composed acidhead to faint with joy. The only thing I've ever seen like it was Captain EO at Disneyland. It is a triumph of imagination, and I fully expect the crowd to head for the doors as though fire had broken out.

But they don't. They're captivated. When it's over, they hoot and whistle like a bunch of adolescents. I realize suddenly that businessmen hunger for imaginative daring as much as I do...they're just afraid to invest in it as individuals. Schooled up like this, and taken by surprise, they embrace it at once.

Unfortunately, the light show will be their last taste of it for the morning. Incredibly Big Management has a batting order of power speakers ready to whip us into a frenzy over Micro Channel architecture, OS/2, and SAA.

The lead was George Conrades, IBM's V.P. of Marketing. In a fairly short speech, he used the words "strong," "stronger," or "strongest" 27 times by my rough count. These combined with the frequent use of words like "aggressive," "driven," "optimize," and "strategize," the practice of hurling

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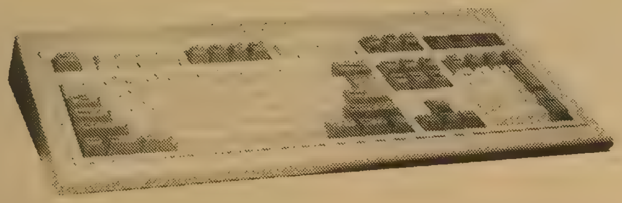

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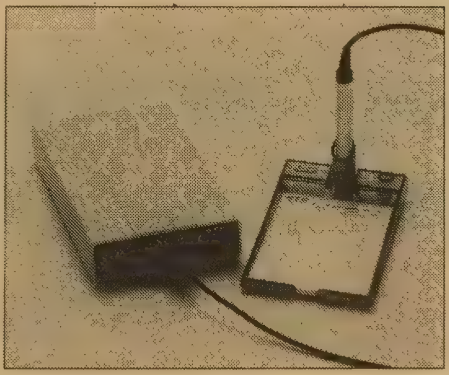

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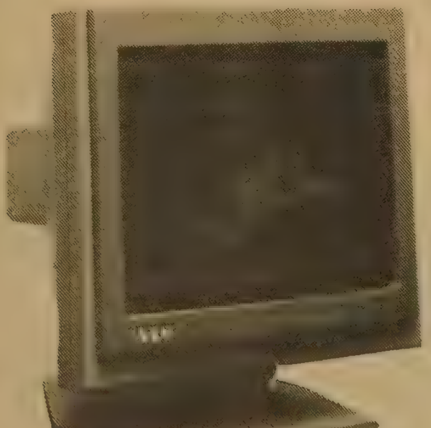

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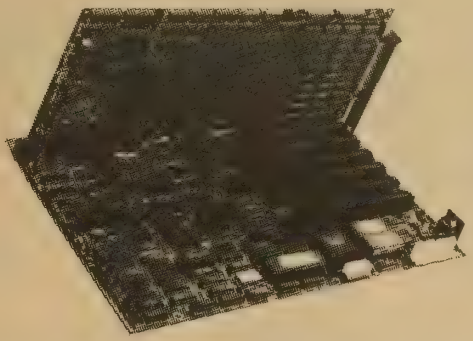

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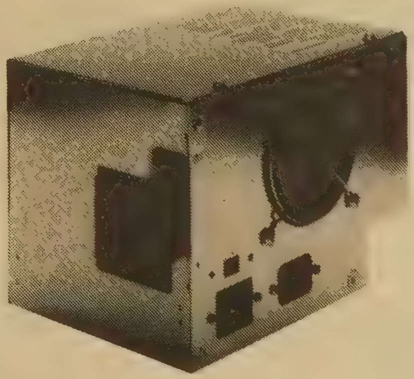

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consonants like darts, and an abundance of military metaphors to make it a vividly virile performance. That he pitched it to the management class was evident in the use of such magnificently bureaucratic neologisms as "solutioning."

But as far as I could tell, his style contained most of the content. The only thing he said which sounded like news to me was his characterization of IBM's mainframes as "super servers" for the PS/2 line, which, if indicative of IBM's new world-view, is one of the all-time great cases of a tail wagging a dog.

Though microcomputers still account for less than 7% of IBM's $50+ billion annual gross, the breakfast made it clear that they are taken very seriously. The folks in the Entry Systems Division, IBM's odd name for their microcomputer group, are no longer the "wild ducks of Boca Raton."

Don Estridge, the visionary computer hero who created the PC, is long dead, and in his place we have the since-departed Bill Lowe, who the *Wall Street Journal* once characterized as "an old-style IBM man," noting nastily that "his wooden public image has prompted some critics to dub him the Gerald Ford of the industry."

Hey, Jerry Ford was at least funny sometimes. Bill Lowe, both in his speech and in the following press conference, most assuredly was not. Neither were the ubiquitous Bill Gates (who gave another demo of the whiz-bang new graphical interface), David House of Intel, or Enzo Torresi of Businessland.

Not that they should bear any comic obligation. It's just that I regard the complete absence of wit to be the first and most pervasive symptom of totalitarianism. Whenever I find myself in a place which is completely barren of humor, I start looking around for evidence of thought control.

And the IBM breakfast was a wonderland of manipulated reality. Whether they were talking about the massive and enthusiastic acceptance of both OS/2 and the Micro Channel, or dismissing the threat of the Gang of Nine's EISA, or refusing to even admit the existence of the Macintosh, these were people who were able to describe a nonexistent world with as much sincerity as anyone in *1984*.

Indeed, the freebooters among them can slip seamlessly from one reality to the next without missing a beat. It was a very different world which Gates described when he addressed MacWorld Boston last summer. And I would imagine that Torresi sings another tune for a breakfast laid out by, say, Compaq.

I would be less concerned if I thought their inconsistencies were conscious lies. Rather they are adapting to an environment of consciousness where such fixities as The Truth simply don't exist.

Threat or Menace?

We are very proud of our freedoms in America, and yet most of us now work in corporate environments which restrict, distort, and confine our thoughts, words, and actions as rigidly as any communist regime. We exercise little choice in what we wear to work, where we live, what we say out loud, and finally, by habit, what we think to be true.

But wait, you'll protest, they'll shoot you in Russia if you don't go along. Naaah. They pretty much quit that years ago. The consequences of free expression in the Soviet Union are much the same as they are here: disenfranchisement and loss of economic security.

Bureaucracy is bureaucracy, is bureaucracy and it doesn't make a damned bit of difference what sort of purpose or ideology it adorns itself with. It is always a machine in which people are interchangeable parts and must behave accordingly. Small computers, rather than restoring individual creation, have become corporate "productivity tools," as much the means of dominating both individuals and information as were mainframes.

COMDEX gave me a vision of the future which would make the movie *Brazil* look like a day at the beach. I saw an economy entirely based on bureaucracy, every mother's son a "knowledge worker."

Most manufacturing will be devoted to electronically automating bureaucratic functions. The mountains of meaningless data will require desktop storage devices with capacities measured in terabytes. All real creation will cease and Americans would devote ourselves to an endless loop of office supply.

Everyone will wear a blue suit, stare all day into a CRT, give occasional power speeches to mask his cultural emasculation, suppress whatever errant ideas break through, live in Marriotts and secretly know that he is doing nothing useful at all. Meaning will be replaced entirely by job security. Production will be measured by data shuffled. No one will have any idea what the truth might be about anything. And laughter will get you fired.

COMDEX made me think that such a world might, like IBM, be "Right for Today, Ready for Tomorrow." ☐

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REALIZABLE FANTASIES • BY JIM WARREN

Cursors, Consumers, Cameras, and Worms

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Text editors have positioning commands that move the cursor to the beginning of the next word and beginning of the next line. Most have commands to move it to the end of the current line and end of the previous line. But few have commands to move to the end of the current word or end of the previous word—move to their last characters—an often-useful function.

The Goddesses of Symmetry and Utility demand correction of this shortcoming.

Consumer Reports On CD-ROM

The last decade or so of the Consumers' Union's eminently useful *Consumer Reports* (monthly) and *Buying Guide* (annual, different content) should be economically available on CD-ROM with robust computerized indexing and fast retrieval.

C'mon CU; you provide invaluable consumer information. Don't limit its utility by bulk of paper and manual indexing. Note: Information on older products is useful to consumers of used stuff—cars, refrigerators, VCRs, etc.

I knew CD-ROM drives only cost a few hundred dollars, and there were some dandy CD-ROMs available—such as Microsoft's "Bookshelf" (containing 10 major reference "books" with interfaces to a dozen major word processors). But I didn't realize there were already several thousand CD-ROMs available—providing everything from Florida nautical sea charts, to white-page listings from 300 New England states' phone books, to census data and Library of Congress records. Still needed, however, is for the prices of many of them to drop by one or two orders of magnitude.

For a theoretically comprehensive listing, get a copy of CD-ROMS *In Print, 1988-1989*, from Meckler Corp. (11 Ferry Lane West, Westport, CT 06880).

Image Scanners And 35mm Lenses

Microcomputing piggy-backed much of its initial low cost on existent consumer products. Television sets begat low-cost displays; cassette audio tapes begat early low-cost mass storage; telephone lines begat low cost computer communications; videogames begat low-cost joysticks, etc.

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Jim Warren founded the West Coast Computer Faire, the Silicon Gulch Gazette *and* Infoworld *newspapers, Video Initiative and the DataCast proposal for broadcast-based paperless electronic newspapers utilizing personal computers. He was the founding host of the PBS* Computer Chronicles *series, founding editor of* Dr. Dobb's Journal, *and founding president of the Microcomputer Industry Trade Association.*

With the onset of hyperstuff that uses images and pictures as readily as text, and lowering-cost gigabyte storage, it's time to have inexpensive digital-image scanners that use popular 35mm camera lenses—Nikon, Canon, etc. This would allow one scanner to be used to input a variety of images—"close-up" pages, drawings, photos, "distant" real estate pictures, and "far out" astronomical images—all by shared utility of 35mm camera lenses.

(Video cameras should also share 35mm lenses, but this isn't a video column.)

Lenseless scanner bodies—like lenseless camera bodies—should provide varied capabilities for varied prices. One variation would be binary black-and-white imaging (sufficient for text and tech drawings), or gray-scale B&W, or full color with single and multiple intensity bits per color pixel. Another range should be pixels per unit on the scanner's image surface; note that pixels per unit of the original image or scene would depend on the lense being used.

Autodesk's founder, John Walker, tells me that such gadgets were at least once available from Data-Copy in Mountain View, and Iconix in New York state—but definitely not cheap.

Also: I wonder how this dovetails with the electronic-image still cameras now being developed in Japan?

Be Loyal To Apple—Don't Buy Macs

Some months ago (editorial lead-times are infuriating!), while most micro makers were announcing lower prices for hardware with higher capabilities, Apple announced higher prices for current products—most notably their Macs. Part of the rationale for the price increase—at least unofficially—was that the Mac was becoming so popular that Apple was backlogged on Mac orders.

Well now, if Apple increased their prices because they had too many orders, we should certainly continue the strong customer loyalty that has done so much to build Apple: We must forgo buying Macs until that nasty ol' backlog is overcome and Apple has excess inventory, so it can loyally lower its prices for its loyal customers. (Be sure to drop a note to John Sculley saying why you're delaying your Mac purchase.)

As a consumer fantasy, let us prove that loyalty is valuable—and reciprocal.

Legalize Fishing Worms

Last November, we had a national front-page furor over a computer "worm" (incorrectly called a "virus" by most of the unknowledgable media). That worm pulled down most of the UNIX-based computers on Internet.

But computer worms—like fishing worms—can be of great value. In the midst of the howls for still more repressive statutes, perhaps poorly drafted by ill-informed congress-people—who may be eager for the accompanying publicity—let us explicitly *permit* useful worms that catch system security holes:

Laws should protect worm-makers who succeed in penetrating networked computer systems

Laws should protect worm-makers who succeed in penetrating networked computer systems, provided their worms do nothing more than announce their presence—and perhaps, in the process, embarrass too-complacent system bureaucrats. Like protecting "whistle blowers" who identify faulty or costly projects, such worm-makers should be permitted and encouraged. They are particularly important in detecting and correcting computer insecurities before such frailties cause harm.

If I remember correctly, Stanford Research Institute once had a high-priced research group whose singular function was to penetrate supposedly "secure" systems. This clearly valuable function is apparently now available for much lower cost—just worm-makers' ego strokes and bureaucrats' earned embarrassment.

Accurate Reporting About Computing

While we're on the subject of last November's Internet worm, let's consider a fantasy desperately needing realization—accuracy in reporting about computing. For instance:

Some ill-informed press and teevee reporters performed a sensationalizing disservice. They said the "virus" (worm) penetrated a Department of Defense computer system—frightening!—but failed to emphasize that the network was DoD only by funding. Though many reporters included this important point, too many said little or nothing about these facts. It wasn't a defense system. It contained essentially no classified information. It was not used for any real military computing. It was mostly university computers, to which many thousands of "insecure" students and faculty have extensive access. These facts cast a very different light on reports that a Defense Department computer system had been penetrated.

You can help: Write letters to editors and station managers when you see such disinformation—or dis-implications—about computing. Responsible journalists will accept, appreciate, and remember such contributions to accuracy.

Suggestions Solicited

Send suggestions for this column to Jim Warren, Realizable Fantasies, 345 Swett Road, Woodside, CA 94062. Published proposals will be attributed to their authors unless anonymity is requested. ☐

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Outside Apple

CEO Bill Campbell On The First Year At Claris

By Mary Eisenhart
Photos: Patricia Leeds

It's December 20 at Claris, and Bill Campbell is looking at me as if I bear the Mark Of Geraldo.

Specifically, he seems to be having grave misgivings about the wisdom of letting A Journalist anywhere near Chief Financial Officer Dan McCammon's office.

However, it's too late. Public relations manager Dan Rampe and I have joined the throng of giggling and slightly nervous Claris-ites gathered a safe distance from the now denuded-of-furniture office of the CFO. Inside the office, on a fresh carpet of straw, stands an elegant, equally nervous cow of the general Brahmaesque persuasion, who's getting reassuring pats from an agricultural gentleman who manages to look more than a little like a Forth programmer.

It's McCammon's birthday, see, and this unexpected denizen of his office is the culmination of weeks of elaborate subterfuge.

Why a cow? "Well," says Rampe, as we're heading back to Campbell's office to address the business at hand, "Dan's from Texas, so we figured he knew about that stuff..."

Campbell's feeling a little gun-shy about journalists. Not unreasonably, all things considered, since the still-unannounced product he now refers to as the "no-comment word processor," the feature-laden successor to the aging MacWrite, has been extensively discussed in the Mac press for weeks. The leak, apparently, was not intentional, and Claris is now steadfastly refusing to even discuss whether it's going to announce any products at the upcoming Macworld Expo in San Francisco.

Claris was founded in 1987 in response to concerns among the third-party Macintosh developer community that Apple ought not to be in the applications business. On due reflection, Apple agreed, and spun off Claris. The company is now a subsidiary of Apple, ensconced in its own headquarters in Mountain View; sometime in 1989, the company hopes to have an Initial Public Offering of Claris stock, with Apple continuing to hold a minority interest.

In its first year of existence, Claris has released updates for the four Mac packages it received from Apple: the low-end *MacPaint* and *MacWrite* and the more sophisticated *MacDraw* and *MacProject*. It filled out its product line with a series of acquisitions and internally-developed products: *FileMaker* (acquired along with its parent company, Nashoba Systems), the *SmartForm* series, and *Claris CAD*. On the Apple II side, in addition to the perennial favorite *AppleWorks*, which it brought over from Apple, Claris offers *AppleWorks GS* and *MultiScribe GS*, which it acquired along with their developer, StyleWare.

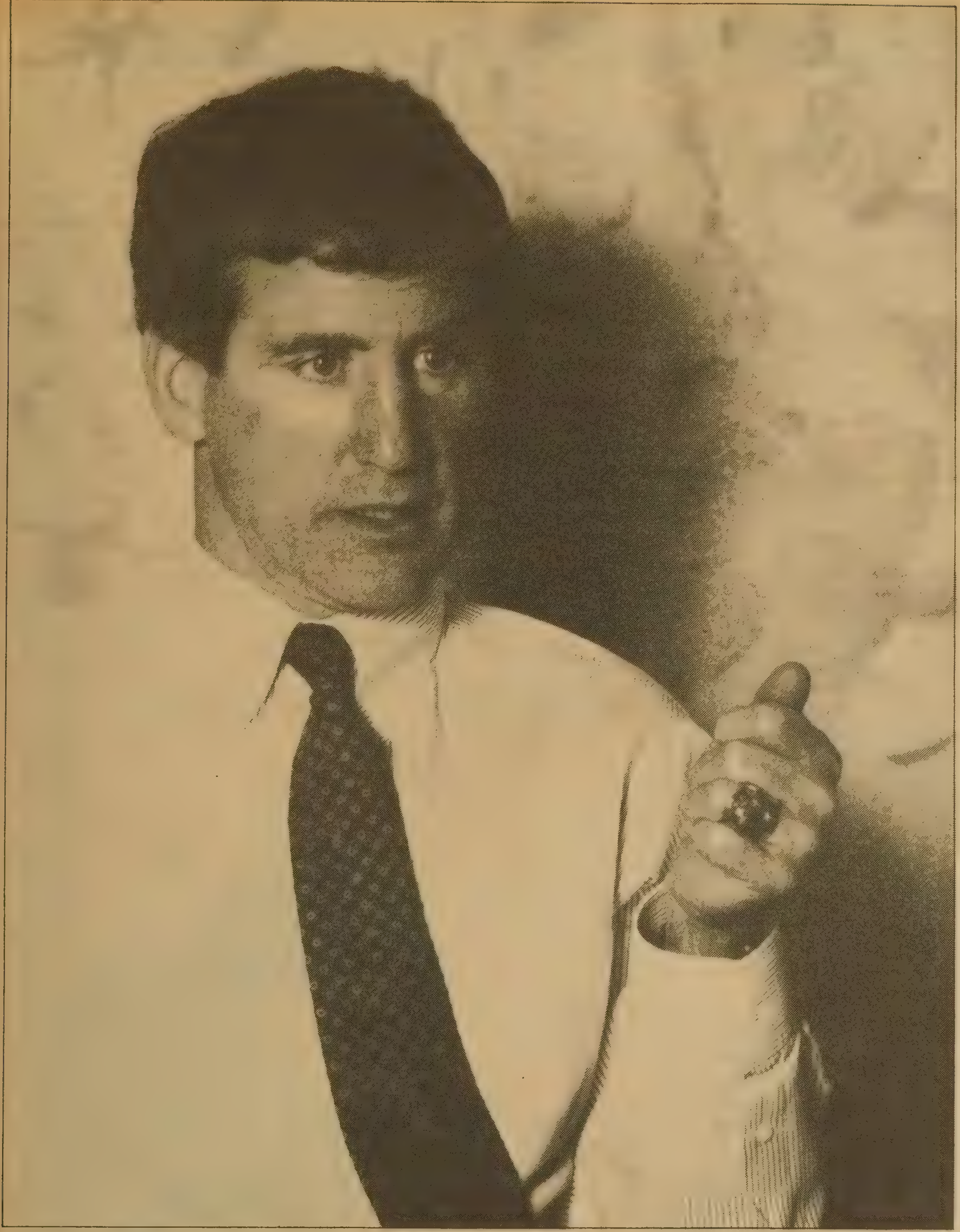
Perhaps because of its unusual origins, Claris has been the subject of rumor and speculation since its inception, to a degree which still seems to surprise even a long-time Apple veteran like Campbell. Formerly executive vice president and group executive for sales and marketing at Apple, Campbell was involved in the creation of Claris from the beginning and has been in charge of the fledgling company since it was spun off. After a year of working to bring Claris to a position of independence from its parents and establish it as a serious contender in its own right, he managed to take some time from a frantic day (even without the bovine distraction) to discuss the company's origins, strategy and future.

To backtrack a little, what was the genesis of Claris and the thinking behind it, and where are you with regard to Apple now?

Claris was born out of a little bit of controversy. At one point Apple—I was part of Apple's management team at that time—had decided that we were going to bring in *4th Dimension* from ACI in France, and that we were going to put an Apple logo on it and distribute it in the US.

Now the fact is that Apple had been labeling applications since 1983 with *AppleWorks*, '84 with the Macintosh applications. And the reason that the Macintosh applications were bundled was twofold. First of all, the reason that they were labeled at all and then bundled was that Steve Jobs felt, in his wisdom, that in order to define a new hardware-software platform standard, he needed to demonstrate its capability. The uniqueness of that platform was demonstrated by *MacWrite* and *MacPaint*, consistency of interface, ease of use—he was very rigid about the rules: Write to the toolbox so that the consistency would be maintained. And as you can tell today, on the eve of 1989, that has worked phenomenally well. Over a period of of time two other applications were labeled, *MacDraw* and *MacProject*.

Soon those products were capable of being exceeded by third parties. And the Apple logo was a competi-



> "We will take metaphors that have been previously thought of as inaccessible and make them accessible. Our role in word processing is not to go higher and higher and higher and make it more complex. What we would like to do is give, in another generation of word processor, more of the features that users want without losing that accessibility."

tive threat. Primarily because the Apple logo added value in excess of the product's ability to perform.

People would default to it.

Absolutely. So basically what we had done is let the applications...I won't say let them decline, but they were not really improved. People were able to exceed those. Apple was in a little bit of a bind, not having updated the applications, not having provided support for them, as well as competing with third parties.

Well, the catalyst was *4th Dimension*. The decision to bring that inside was met, in the software community, with great hostility, and very simply, Jean-Louis Gassee, Mike Spindler, and myself met and decided that we probably shouldn't do this. In fact, what it did was that it called into question the fact that we were labeling applications at all.

We decided, as a result of giving *4th Dimension* back to ACI, which went off to be Guy Kawasaki's company Acius here in the US, that we should get out of the application business. So we wrote a white paper for John Sculley's staff, suggested that we get out of the applications business. One of the options that we recommended that should be considered was that these applications should be used as a core group of products to begin a company, a company whose primary purpose would be Macintosh development, optimizing the Macintosh platform.

The second part of this is that just about the same time PS/2 had been announced with OS/2, and though a year and a half later it's not yet proven to be the competitive threat that Apple had anticipated, at that time the graphics interface that had been described appeared to be a competitive threat, and we were very concerned that Apple would lose its differentiator. There were some applications that had been done at that time that were written for *Windows* and ported back to Macintosh, and the best advantages of Macintosh were not taken advantage of.

So in the decision we made to use these products to start a company, the primary thing was to eliminate the competition with third-party developers, but the second was to put a major company in place whose primary purpose would be Macintosh applications, to optimize Macintosh, to write to all of its advantages. And with those two challenges in place, I raised my hand and felt that that would be something I would like to do.

On April 27 of 1987, everything happened very quickly. The board approved it and John released it to the press. We weren't known at Apple to keep secrets inside very long, so we felt that we had to get this out to the press with a very clear message. John announced it to the press; it was announced that its purpose was to optimize the Macintosh platform, it would be spun off as an independent company—18 months to two years was the time frame that had been suggested—and it was felt that over a period of time Apple would reduce its holdings to have a minority position in the company.

It took us about five , almost six months, to separate financially from Apple. The software group was really a product marketing group; most of the marketing had been done other places. Sales were done through the sales force, there was really no separate division that ran this, so that all of the operating structure had to be put in place. We hired a team, many of them from Apple, people that I'd worked with very closely: John Zeisler, who'd been director of business marketing at Apple; Donna Dubinsky, who was director of sales and had gone to International; Dan McCammon, CFO; David Kinser, vp of operations. Those are the Apple people. Bill Joos [Claris vp of US Sales] who came from a manufacturers' rep out of southern California and had done a lot of consulting for us over time, and one of the key hires, Silicon Valley guru and a technology wizard, Yogen Dalal [Claris vp of product development], who'd been one of the founders of Metaphor and before that was at Xerox PARC.

The team came together, we put the operations in place, we separated financially in September. We had our own packaging and launched the company formally in January—we're coming up to our one-year anniversary in January at Macworld.

The relationship with Apple continues to be total separation—a little bit more separated than we'd like. We'd like it to be somewhat closer, but I think Apple had a really hands-off attitude so that there would be no question from other software developers in the third-party community that Claris was not getting favored treatment.

The intent to spin off the company and make it separate is only mitigated by what is a kind of uncomfortable public market at this point. We're operating independently right now; I would think that it's realistic to say that sometime from mid-summer on we would be ready to go, given that the public market is accepting of IPOs.

So we're not far away. We've spent a year putting a lot of structure in place. We have always thought of ourselves as a worldwide company—it takes a lot of investment, and of course being a private company, or a sub of a large company, we had the time and the financial backing to be able to put structure in. So we've done that.

We've grown tremendously over the last year—obviously I can't give you any numbers, but it's sufficient to say I think it'll be a surprise when we in fact do go public. We have commanding share of a few major segments—low-end word processing and graphics in particular, and there are a few other categories that we're about to enter, and hopefully create—one product that we're releasing this week is called *SmartForm,* the *SmartForm* series, a designer package and an assistant, which allows the form to be filled out. And *Claris CAD* was the other—we feel like we're going to take what had been a high-end specialized segment and bring that down and make it very horizontal.

But there are other things that you'll see us do over a period of time. We needed to put structure in place that would allow us to grow. Now that the growth is taking place, the structure is development, the structure is operations. We have a manufacturing and distribution facitity in Dublin, about 30 people, we're localizing 44 versions in 10 languages over there.

So that's where we stand with Apple—separate, but not separate financially until an IPO. Our relationship is better than it was, without offending other people in the third-party community. And the company is growing.

How would you like to see your relationship with Apple evolve?

I feel like if we were able to maintain the relationship as we see it today, technically and marketing-wise it would be fine. I think Apple continues to grow, they have a good focus on future segments—they started out with a low-end horizontal segment, they've moved up to where they've provided a nice performance umbrella with the Mac II and its derivative the IIx, and now they'll fill in the gaps in between, and I think that's going to bode well for market share. So that's good for us.

The financial separation—I think it's just a matter of course. I don't think there's anything dramatic in that. As they reduce their holdings in Claris, I don't know that the situation would change any. I've got three Apple people on our board—Al Eisenstat, who's chairman of the board, Mike Markkula, one of the founders of Apple, and Debi Coleman, who's just recently stepped down as CFO, have been on the board, plus myself. So they've been tremendously supportive and really helped us in this startup phase, but I don't feel like there's anything that anybody would have to worry about. I think it's strictly a financial issue as to when they reduce their holdings.

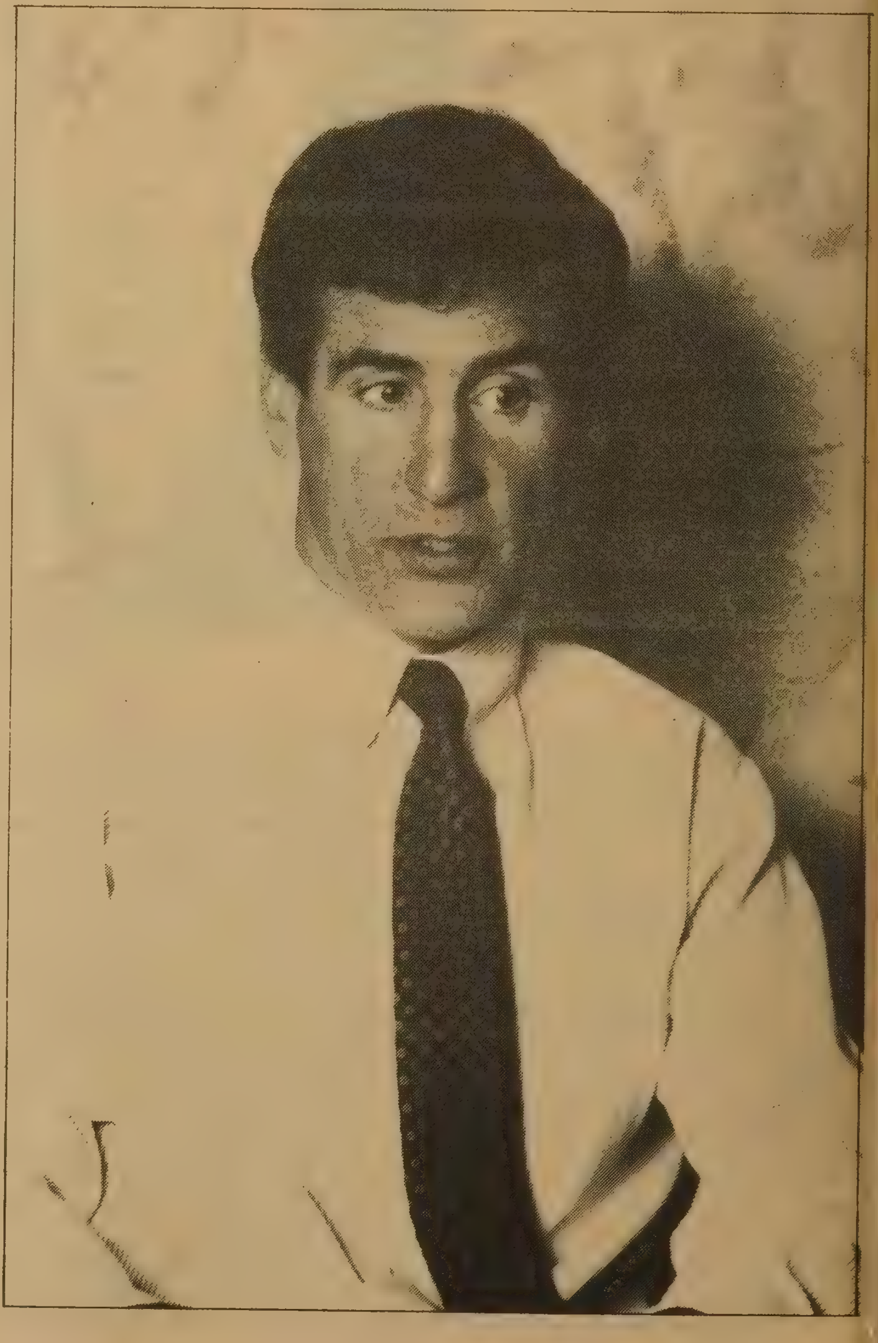
You say that you were founded essentially to optimize the Macintosh, expand the Macintosh envelope, and yet at the same time you have significant Apple II product in AppleWorks and AppleWorks GS. What's the relative importance and positioning of the two product lines?

We talk about the Macintosh as being the primary reason that Claris was formed, and I get a lot of criticism from people in the Apple II community, but when we acquired *AppleWorks GS* and did the public announcement, I said we were committed to the Apple II, and I felt like we would demonstrate that by performing.

If you think about what we want to do, we are very much market-driven. Markets have been important to us. John Zeisler's influence at Apple was that he took the markets and segmented them very horizontally, and determined what segments Apple's products could provide distinct advantage in attacking. That was demonstrated—desktop publishing was a real good example. Desktop productivity, communications to host—there are things like that that you are able to see—what advantage does that thing provide the naive user?

Now for us K-12 is a significant segment. *AppleWorks* is the leading application there. As the GS becomes much more important in that mix, we have the leading product on that as well. As the Macintosh then makes its way into K-12, if we can do something similar...

So what *AppleWorks* represents for us right now is a very strong component of our education strategy, and the product itself is critically important to that. Other products will be important to that as well, so if Apple evolves from the Apple II to the Macintosh in K-12, we will be prepared for that. If they continue to iterate the Apple II to insure that it is appropriate for K-12, like they've just done with their networking component in their strategy, we'll be there with the leading product. So we look it not as *AppleWorks* the product but as *AppleWorks* the component of our K-12 education strategy.



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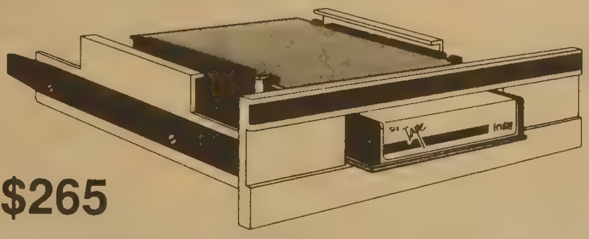

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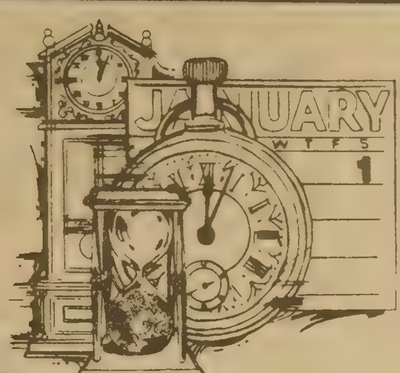

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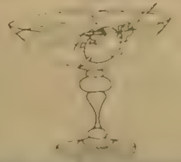

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It surprises me a little that the primary market for AppleWorks would be K-12.

It's not even a question. K-12, as well as being 50% of our sales of the Apple II, is a pull. . I know that I offend some of the people that are using Apple IIs for small business and the home office, but if you take a look at the research we have, people—I mean, I use my Apple II at home for my son, because that's what he uses at school. And so many people will have those Apple IIs at home—the home-education drag-along is enormous. I'd say that's 85% of the market. So K-12 and the pull side of what K-12 brings along is most of the market.

Apple is stressing connectivity a good deal. How does that fit in with what you want to do?

Connectivity is kind of a vague term. There are a lot of ways we can look at connectivity. Obviously some of the things that they've done have been, I think, very strategic and very important. I think they've reduced the need for putting database engines on their own boards or reliance on one database engine versus another by the acquisition of Network Innovations with CL1. We have a database in *FileMaker*—the addition of CL1 to *FileMaker* would certainly allow us to have access to remote data. So the fact that Apple not only will write that for the Macintosh but will make it available, probably on a for-free basis, allows us, a leading database vendor, to have access to remote data. So strategically that's an important part of their connectivity strategy.

Strategically the more important thing is that we believe the workgroup is the catalyst for the next wave of acceptance of microcomputers. You're in Claris's building right now—if you walk around, of course everybody has a Macintosh on their desk. Not only that, you heard that little ring there that alerted me to the fact that I have an electronic mail message. Now if I want to communicate with anybody in this building, I can just walk over there and sit down and type them out a message, click on their name, and then—see you later, it's gone. So in this office right now the workgroup just for communicatons is important.

Now, in your office, would you buy a Macintosh just to be on the sending or receiving end of electronic mail? I think not. On the other hand, thinking of electronic mail as the hub, or as the core of the underlying architecture, the ability to send and receive information, you can envision workgroups. You can envision any of us here working together. In many cases it could be collaborative work, it could be just shared information. But we see the workgroup as being ideas, processes, and people—those are the three components of workgroup productivity, and we think we have applications that can enhance all of those areas. Can and will.

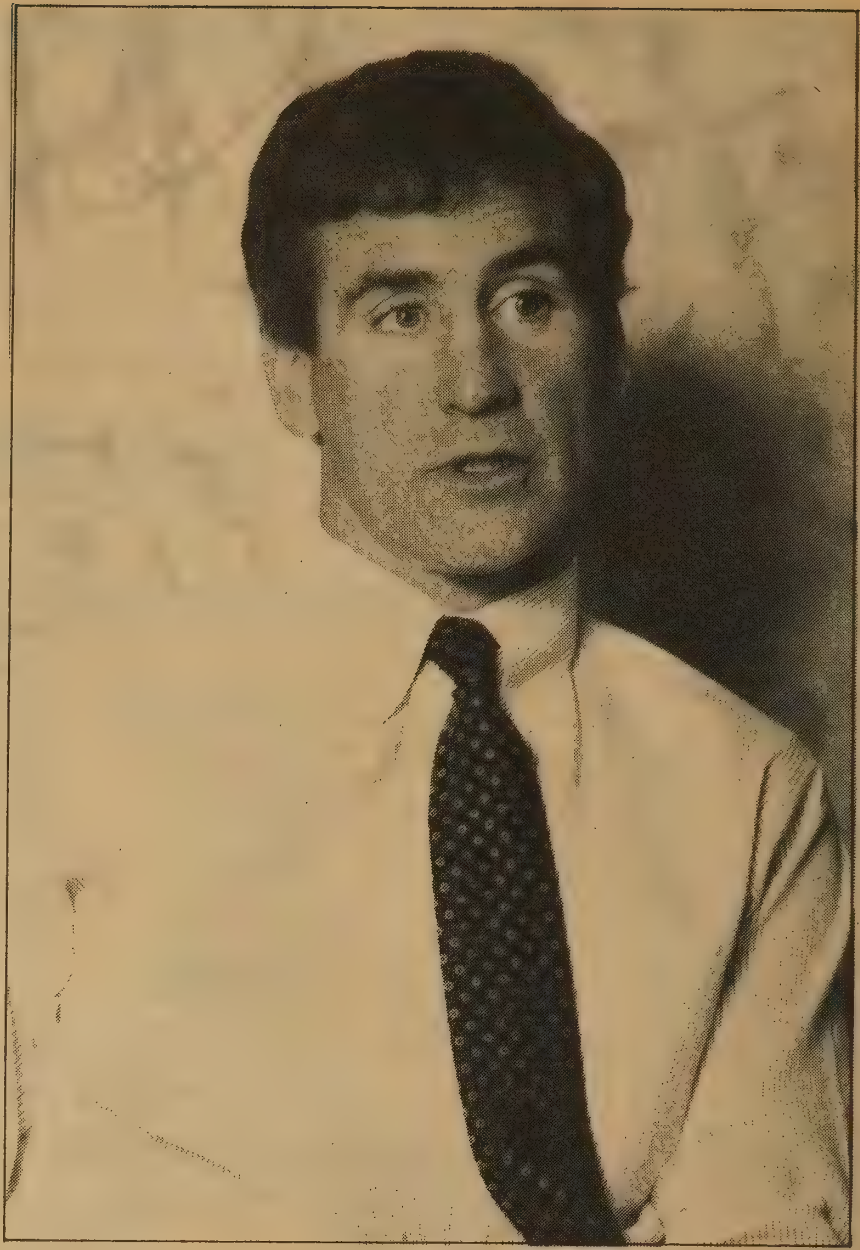
Connectivity, the ability to have high-speed data transfer between and among machines, that ability to do those kinds of connections, is really important to insure that the workgroup becomes something other than a buzzword, that it can be, in fact, accomplished. So we're relying on Apple to continue to improve those links, because not everything is going to be like it is at Claris, a Macintosh environment. A heterogeneous environment is more what occurs out here in the other part of the world. The unenlightened.

Make a note that I smiled when I said that. (laughs)

But I think that the multivendor environment is something that is crucial to us and Apple, and that their ability to provide logical high-speed connections will allow informations to be passed between and among computers and shared. The truly distributed architecture is what they need to provide, and I believe they're on the way to doing that, and I think our applications can help more and more people, bringing the naive users into the office and allowing them all to participate.

Because if I could make someone do more than just send and receive electronic mail, if I could give them two or three more things that they could be productive with, the computer will become as ubiquitous as the telephone. And we believe that it has to be, it *should* be the communications device, but people need to do more things with it. Like electronic forms—if you can call up an electronic form, for instance your expense account, fill it out, it'll do all the error checking for you and send it on to [the bookkeeper], and she can send it on to the CFO for approval, and then it can be archived in our VAX—it's a wonderful way to improve office productivity. That's one process. Calendaring is another process.

But if Dan and I could sit and worry about a presentation that we're both going to make at Macworld, and we've both decided to work on a document that we could share and it becomes truly a shared document, the collaborative work that's done there is conceivably idea generation. We can go back and see: what did we say the last time? Or, let me see if I can't get the text of John Sculley's speech, so I can put that it. So you review it, revise it, lay it out, review it, revise it, take images from other environments, store and retrieve, so that the next time you do it it's kind of an idea generation.



So those are the things of whch workgroups are born. And that's the reason people would want to get computers. To this day—I mean, you know, we're still around 25% penetration. So who are those other people who aren't using them, and why?

So that's what connectivity means for Apple, and that's what workgroup means for us. They provide the plumbing, and we'll build things on top.

One of the approaches Apple's taking to the workgroup idea is A/UX. Do you plan to address A/UX in any way you're not doing now?

Absolutely. We're totally committed to supporting Apple and A/UX. In fact, one of the discussions we had over there yesterday with the Apple people was how can they help us in bringing our applications. If they are truly 32-bit applications, which ours are, the testing procedure is really not a problem. They are continually enhancing A/UX, which is part of the problem right now, and when we get a stable 1.1, then we can begin to test for it. But I would say that by early spring virtually all of our applications will work under A/UX.

Graphics as well?

Oh, absolutely. See, if we write to the toolbox, we're in great shape. Fo instance, I can tell you right now that we're in the process of testing *MacDraw II*, *MacProject II*, *SmartForms*, *Claris CAD*, *MacWrite*, and on and on. *MacPaint* will be one that we will not—it's not necessary. All of the other applications are well-written and are able to be brought to A/UX.

How strategically important A/UX is is a different question. We believe that it's a critical component of our strategy in two key markets: the university market, higher ed market is a critical one for us, we're addressing it very aggressively; and the technical market, with *Claris CAD* and *MacProject*—most of what an engineer would do in a technical market environment is horizontal stuff, and if working under UNIX is something they want to do—I feel like we get UNIX free, and if they want to do *MacWrite* and *MacDraw* under A/UX, well, we got it. So we feel that it's strategically important for two of our major markets.

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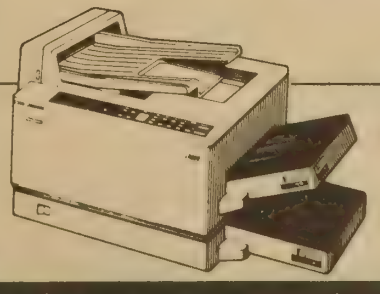

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The thing is, if you take a look at what we're doing right now—and I think you've probably watched us over a year—what we do, rather than adding depth, which means going to other platforms with the right current applications—breadth is more important. We're getting into other segments.

If you take a company that's like ours, roughly 285-290 people, and you say you want to grow, focus is really important with you. Couple that with the fact that in order to grow you need to be in a lot of segments. It's very difficult.

You could say that it would be easier to work on the same application over many platforms, or you could say that it would be better to work on many applications. We've chosen the second because we really feel that the Mac user is quite different attitudinally—we learned that from our Apple days—and that we have a better opportunity by understanding the market, have our sales force really focused in on certain dealers, certain customers, who are really accepting of Macintoshes, and we think that the best business opportunity is to focus on Macintosh. There's some religion there—I would be less than honest if I told you that it was a total business decision. I think there's emotion in that.

It's pretty hard to divorce that from the Macintosh.

Yeah, I mean, we've been at this for a long time. There's a whole bunch of us that have been there since the beginning of Macintosh. There are some here that have been here since the beginning of the Apple II. So you know we're very, very devoted to the ability of Macintosh to democratize computing, and we feel that that's the platform we want to work on. Now we will not hurt ourselves businesswise, but we think that the business proposition matches with the emotional decision that we're making, and we feel very strongly that Apple's future direction will really support us.

To what extent are you developing software in-house at this point, and to what extent are you looking for outside acquisitions?

I think the outside things right now would be serendipity. What we've done is essentially—see, there are three phases of Claris's life. One, we had to look like a real software company, take the products that we were given and update them and make them appropriate for today's market. We did that. Two is that we had to begin to put a development organization in place right away and begin to do development, which was going to take anywhere from two years to 2 1/2 years—we knew that. Just hiring people, putting them into place, defining projects and getting them done—I don't think that anybody would tell you any different from that.

So we did that, but in the meantime we had to fuel that growth while internal development was taking place, so we bought a couple things. We bought *FileMaker* from Nashoba—we bought the company, actually. We bought *AppleWorks GS* from StyleWare, and those two products gave us—one was an entrance to a new category, and the other was the extension of something we really felt that we had a strong position in.

Along with that we bought some technology, some things that could accelerate our own internal development. Some of those things will become evident to you in the next couple of months, some of the payoffs of that. The *FileMaker* acquisition is quite clear, the StyleWare acquisition is quite clear, some of the technology acquisitions will become evident to you in time. Most everything that we have right now is in the internally developed area. We're not afraid of outside development, we're not afraid of any other acquisitions, but there are no targeted categories that we feel like we must be in.

So I could show you some charts, but I think that sales of internally developed versus externally developed products will change markedly in 1989. So some of the products that we have from Apple were externally developed products, but almost everything we have will be brought inside.

We're not religious about developing it inside as much as it does give us control over iterations and improvements in the product, and we think overall we'll be able to help the customer. But great ideas occur everywhere, and the message that we gave the small developers is: If you have something that you feel is exciting, we'll sure look at it. We look at stuff every day. I don't have any doubt that in this next year we'll probably acquire something. Maybe more than something, maybe somethings that we really feel would be a key technology that would help us with our own development, or maybe a product that's most of the way done, if we felt like we could Claris-ize it and ensure that it could expose a new market to us. We're into market makers, if there are such things.

What does Claris-ize mean?

Well, we think that the consistency of what we do is pretty important. The feel of our products is pretty important. If you take the Claris products which you'll see today and you'll see in the future, there's an interface consistency, not simply what the Macintosh provides in terms of toolbox. *Claris CAD* is a good example. We've taken a very complex metaphor and married it with *MacDraw II*, and put the dimensioning tools in place, and actually put another palette of menus, modifiers that will really make the thing easier to use. So that if you look at the interface for a couple minutes and someone says "Let me show you how this last thing works," and you go "Aha!"—if you take a look at the all of the things we're doing—and some of them of course I can't tell you about—you're going to see a consistency. If you use one Claris application you should be able to use them all. People will say that that's the case with all Macintosh products, and you know full well that that's not the case.

Over a period of time what we've got to do is make those products be more valuable to one another. Be able to open a *MacWrite* window in *MacDraw*, or vice versa. So what we've got to do is ensure that our products work very, very well together, so when I say Claris-ize it, I would say it's look and feel and the ability to work well with our own packages.

You don't at this time perceive any glaringly obvious arena that you ought to be in and aren't?

No. People have asked us about spreadsheets, and we think that that category is very, very well served. Microsoft has a phenomenally good product.It doesn't make much sense to try to compete with them in an arena in which they are very, very strong. There's a lot of places that we could go, and that's not one that we feel we could add value in.

Some of the other areas that people have questioned us about—presentation. I think presentations are more done by average people like you and I who have to do something very

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quick for a presentation to someone. And I'm not sure that people would buy specialized—I think that they *will* buy a specialized presentation product, but I'm not sure how many. (laughs)

Those are the questions we get—are you going to go into presentations, spreadsheets, multimedia? Those are the ones we get, and the answer to those is, at this point, no. It isn't something that we're aggressively pursuing. We think horizontal presentations are very important. I think the accessibility is the issue—should you go out and buy a $3- or $495 product?

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Right.

How have Apple's price increases affected you?

I think Apple's price increases on the Macintosh side didn't affect us at all. Apple had a strategic decision that they had to make, whether to let their gross profit margins and thus their profitability erode, or to raise prices to match rising costs. I think that they held off as long as they could; I think they lined up and stood up and took the public relations hit that price increases caused them. But I think that with that there's no reduction in R&D spending, which is the critical thing. No reduction in marketing, which is important so that Macintosh's acceptance continues to unfold.

On the other hand, I think the Apple II price increases hurt us. I think that we saw a resistance on the higher end of the II line, the GS, to that price, particularly when they ship the product with 512 K and you need at least 1.25 megs to run our IIGS product, as well as almost every GS product. So I think you combine cost of memory and the increases in that unit, as well as the RGB monitor—I thnk it hurt us on the GS side.

I think we saw a lot of resistance in the schools. We expected with the installed base of Apple IIGSes that's occurred over the last couple of years—I think Apple's done a phenomenal job of getting the customers to move from the Apple IIe to the Apple IIGS. They didn't buy *AppleWorks GS* because of the cost of memory. And of course they didn't buy a lot more new units. So where are the sales going? Do I see resistance? Is there a price point at which the customer won't even come into the microcomputer market? Has it been a discretionary item at Christmas?

Look—I mean, you've watched Apple's sales. There's always a peak every October, November, December. It's always the high quarter, so Christmas does exist even at Apple. And as less-seasonal as Apple's sales are becoming, there still is a seasonal peak based on the Apple II at Christmas. I wonder if they're going to see—we had a great selling of *AppleWorks GS*, but just the information I get from the dealers that I talk to, there's been some resistance because of memory and price. I think people could've gone out there and bought it and even paid a gouged price for memory if the price had stayed the same. But you take those two factors, the whole-unit increase plus the required memory—that just put it out of reach of a lot of people.

How competitive do you feel it's necessary to be in your own software pricing?

Pricing is an art (laughs) not a science. I lie in bed at night worrying about pricing. We just made a decision on pricing of a product that we'll announce here in January, and I woke up this morning with it on my mind, in the wee hours of the morning thinking about it.

So I think what you do in pricing is you've got many dimensions. You try to lay your product out competitively versus somebody, and try to give yourself a price-performance rating relative to the competition. Then you try to also think about market share—is that important or is that not? Would you rather have a smaller market share and have a higher revenue per system? Some people make that decision. Or is it price-sensitive enough that if you lowered the price you could gain significant amounts of market share, which could gain you critical mass either in the marketplace or in various customer segments, and allow it to perpetuate itself there? I think those are the two factors that we try to examine. And of course the third thing is your company's profitability overall. But it's not an easy thing.

We find pricing very difficult. Pricing, ultimately, I do. I take the recomendations of John Zeisler—we had an off-site last week, we rode up and back together, and we made a decision on price, and we sat on it overnight and talked about it with some other people, and we sat on it overnight, and we talked about an upgrade price, and talked about it overnight, and talked about the upgrade price again—that's the way you do it. You see—it has to pass your test of reasonableness at some point. And the financial people, though obviously interested in the decision, as long as you're within a window of

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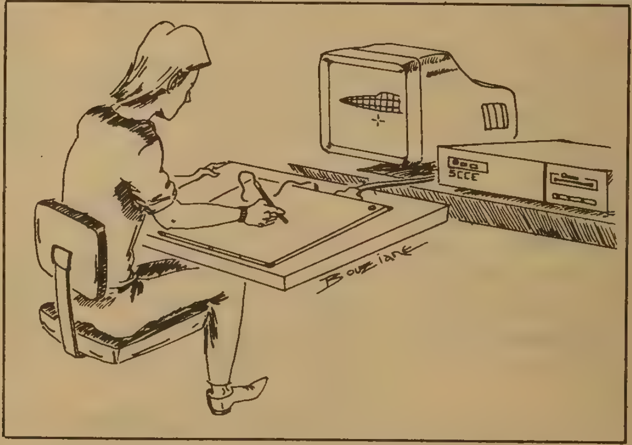

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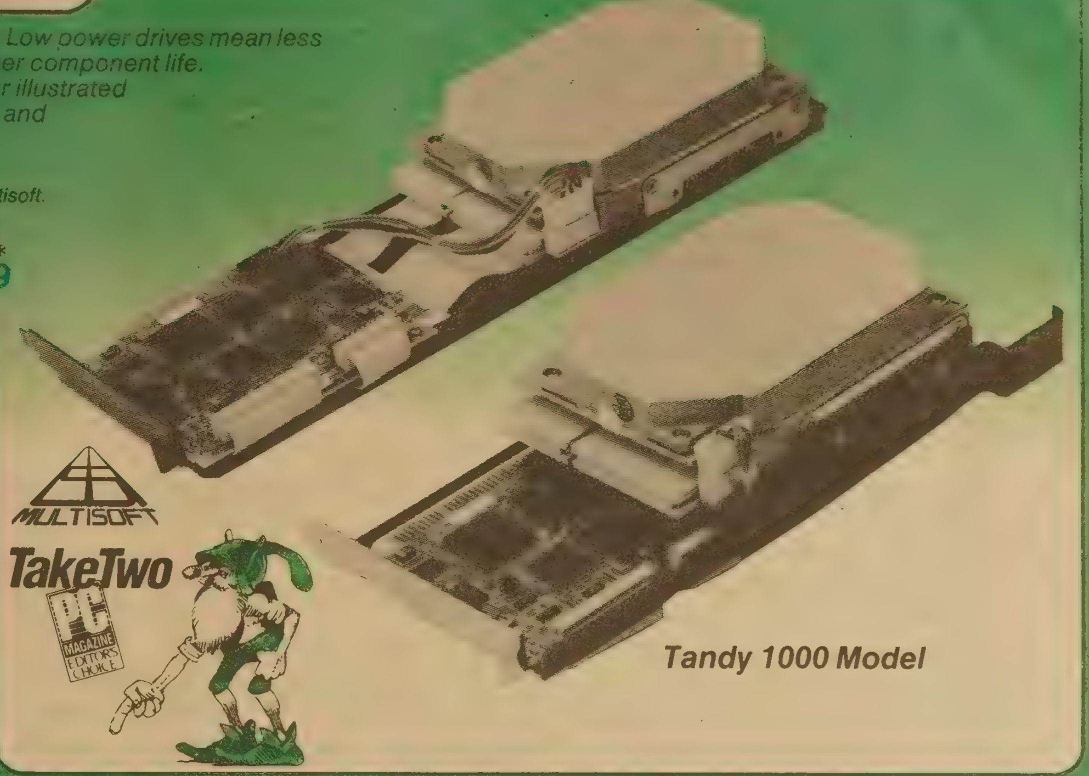

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profitability targets, I think that's fine. The first two issues are critical—us versus the competition, and our thrust for market share. We think market share is important—we don't want to be a niche player in any category.

You have a fairly wide range in your products from relatively low-end things like MacWrite and MacPaint to relatively high-end and relatively sophisticated packages like Claris CAD. Does this give you problems positioning yourselves in the market?

Well, if you look at it, I think what you see isn't always what you get. I think what we looked like last January and what we look like today are very different. A couple consistent things are these—all of the applications are capable of being brought down from what had been perceived as high-end metaphors and brought down to average users. If you look at the product end overall and you just think about the highest-end segment, let's call it the most complex and technical segment that we would be dealing with, it would probably be the scientific/engineering community. And you can take Apple statistics and say anywhere from 50 to 70% of what they do during the course of a day would be horizontal productivity—word processing, database management, modest graphics. You'll find that if you look at the portfolio we've got, except for maybe *MacPaint*, which I would agree with you is probably at the other end of the spectrum overall, there's not any one of those products that's not appropriate from a horizontal productivity standpoint, regardless of how junior or how senior they are in the organization.

> **"If you use one Claris application you should be able to use them all. People will say that that's the case with all Macintosh products, and you know full well that that's not the case."**

Now *MacProject* and *Claris CAD* are both targeted at a higher end segment, but again both of them are accessible enough that it would be the horizontal part of the higher-end segment. Our product *Claris CAD* is not going to do finite element analysis or solids modeling, and yet it is a true CAD program that conceptual design people at major corporations could do that and send that on to their specialist, who could put that through the file translators, take that into another system and take it to its finest control.

The line will continue to evolve, but it will still take on the characteristics of horizontal applicability. We will drive for accessibility. We will take metaphors that have been previously thought of as inaccessible and make them accessible. Our role in word processing is not to go higher and higher and higher and make it more complex. What we would like to do is see if we can't give, in another generation of word processor, more of the features that users want without losing that accessibility. So, you know, the mid range of the word processing market is where we think our stake is, and we'll continue to protect that very well.

The line overall—it would be inappropriate for me to comment about where it's going. Its sufficient to say that there are some things that may look a little bit out—you could take *Claris CAD* out that way and *MacPaint* down that way and say they may be a little far out, but this one will come in, and once you see it and use it you'll know why this thing is going to come in to the horizontal part of it. And down here, I don't think there's any question that this thing [*MacPaint*] is not state-of-the-art. I think its price/value is phenomenal for the monochrome machine, and it's still selling very well, particularly in our international market.

You don't want to talk about the products you're going to be announcing at Macworld?

No, we're not announcing products at Macworld. What we're going to do with our products is kind of announce them....

We've done two things. We felt that last year in January it was important that we use Macworld as a platform to announce our company, and with that we announced the upgrades on the products that we were taking on.

In August we made a mistake. We made a marketing mistake, and the marketing mistake was that we announced products that weren't ready. We felt that to try to make a bang at Macworld was what we should do, and we announced *Claris CAD*. In the meantime, as we were getting some feedback on it, there were some things we felt that we had to fix as a result of that feedback, and the product is just being released now. We thought at that time we could get it shipped around November; I'd say

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we missed by maybe a month and a half.

But we're not going to announce products now until we're ready to ship them. I think we caught ourselves with that mistake and we won't make it again. So if we have a few things that we can announce at Macworld, we will, and if we don't, we won't. The more we go on, the more chances there are that we will be upgrading or replacing current products to make them better. We've done a good job of keeping ourselves under wraps—we have done some sneaks of some things that we're going to announce, and if you're a Mac advocate you know that one has been leaked into the press.

The relatively high-end word processor. . .

The relatively no-comment word processor. So you can just assume what I said before, that it won't be a high-end word processor. You can assume that, just based on the strategy that you heard from me a few minutes ago. So we have no problems—we're not as leaky as other people have been, but unfortunately this got out just after we started our press briefing.

Maybe it's just my perception, but there seems to be a huge increase in the amount of vaporware—leaked or announced—lately. What are your feelings on this?

Knowing how we think, I think that what happens is you try to make an impact, and there are Macintosh events where you feel that you can gain some publicity as a result of announcing things. So you do it. And I think you do it in all—we announced the *SmartForm* series last January, with the idea that between March and May we could ship that product. We felt that it was important that we let people know, because the Clearview acquisition was announced in the paper, people knew what the product was, so we didn't think that we were giving away anything, but we made a big deal out of it at Macworld. In the meantime, again, we put it out and got customer feedback that we needed to fix some things. So with that in mind we had to go back to the drawing board. This was at the alpha level.

I think the *SmartForm* series announcement was the right decision because people knew about it already, and that *Claris CAD* was the wrong decision by us. I'm not afraid to admit that. So what we're going to do is be a lot more careful.

Do I criticize people that do it? Having done it, I know why they do it. I think the testing process right now is taking much, much longer than it ever did before, and give a lot of these people in the Mac community a lot of credit—I think that people are taking a lot longer time to test, and I think their products are probably done. And they're testing them, revising them, testing them, fixing them, testing them—and I think the test process is interminable. It just goes on forever; with the state of the peripherals today, you have to test on so many things—you have three printers from Apple and multi-multi monitors and scanners and on and on.

In our second quarter, which starts in January, one of our key objectives is to see if we can't raise the levels of customer satisfaction. We need to hire more technical support people and more people in testing so we can really be assured that we're banging on the products, to make sure they go out flawless.

But taking an example out of the Mac world, for instance, they had all the fireworks and hoopla for OS/2 close to two years ago and it's not here yet in any form that's useful to anybody. Is that too long a vapor cycle? Do things like that hurt the industry?

It's hard to say. Did it pique everybody's curiosity to the point where people thought there was going to be a graphics interface for the PS/2 platform? The answer is—yeah. Did it delay purchases? Did it hurt Macintosh? I don't know. I think people needed to feel comforatble that IBM on their new line was going to approach the accessibility of the Macintosh with a graphical interface, and with that they teamed up with Microsoft again, and announced a joint development to allow that to happen.

Is that good, bad, or indifferent? I think if you're in the IBM world, and they would always give strategic briefings to customers about future directions, I think that's probably kind of standard fare, in that their customers who are busy right now buying 286es know that in the future there will be something else there, and people who are IBM customers are in it for the long term.

So (laughs) I *guess* that's the strategy. I mean, I don't really know. How do Icriticize? It's not something that I really dwell on. I don't get as burned about vaporware as others. I just think that the vaporware thing hurts them.

It's certainly hurt Lotus.

But then, would Lotus be more criticized for people thinking that they weren't updating their product? Or announcing it and not delivering it? I don't think that they could win on that one. ☐

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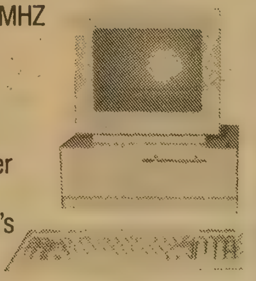

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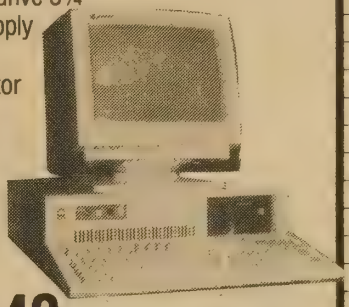

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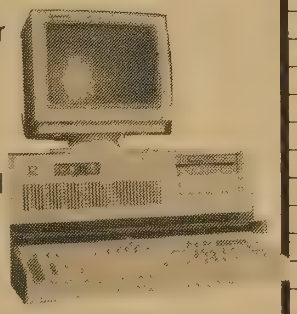

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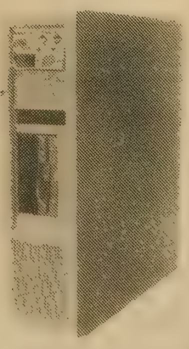

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Doug Engelbart: The Vision Continues

By Howard Rheingold

Says Engelbart, who envisioned the mouse, the word processor, and "groupware" decades ago: "The world is getting more complex at a higher rate and we need new capabilities to deal with that."

On a December day in 1950, Doug Engelbart had a vision. He saw a theater-like environment of the future in his mind's eye, a problem-solving workshop where people would create and handle knowledge in wholly new ways, working at large display consoles that displayed text, graphics, and animated models. He had been thinking about the growing complexity of the world's problems, and wondered how he could contribute to a solution. In a flash, Engelbart realized that the newborn technology of electronic computers, linked together with other infant technologies such as television screens, could multiply people's abilities to tackle problems.

Unfortunately, nobody in computer science or the computer industry had the faintest idea of what he was talking about. In 1951, there were about a dozen computers in the world, and they did nothing but mathematical calculations, almost exclusively for the military. And along comes this electrical engineer from California saying that computers will change the way office workers, engineers, educators, accountants, managers, designers do their work. People just looked at him blankly.

The term "knowledge worker" wouldn't be coined for almost two decades after Engelbart started building tools for them, but with the help of enlightened research funders in the Defense Department's Advanced Research Projects Agency, NASA, and the Air Force, he did what few visionaries are able to accomplish: he built working models of the devices he imagined years before. He showed that computers could be operated by non-programmers, and demonstrated dramatically how they could be used to amplify people's thinking capabilities. If you ever use a mouse, a word processor, an outliner, you are using the direct descendant of one of Engelbart's brainchildren.

His first technological prophecies, and the research effort he built upon their basis, led directly to the development of the mouse, video display editing (and its natural descendant, word processing), windowing, hypertext links, outlining, mixed text and graphics, shared-screen conferencing, computer conferencing, and collaborative composing and editing software.

Now that the hardware components of the system Engelbart worked on for decades are finally becoming commercially available, the social innovations he also forecast are emerging in the form of buzzwords like "groupware".

These inventions and others emerged from the government-funded Augmentation Research Center (ARC) Engelbart set up and supervised for 14 years at Stanford Research Institute (now SRI International). In one spectacular demonstration in San Francisco's Civic Auditorium in 1968, to the Fall Joint Computer Conference, Engelbart led the ARC crew through their paces and forever changed the way computer designers think.

ARC is history, but Doug Engelbart is still in the vision business. This time, he's talking about a new agenda for the next 25 years. When he publishes his current work-in-progress, it might not hit the *New York Times* best-seller list, but you can be sure that it will be on key desks from Silicon Valley to Tokyo within a week of publication. Many of his former colleagues, students, and research assistants are now in positions of power at Apple, Sun, DEC, Adobe, and other influential companies.

When Engelbart published "A Conceptual Framework for the Augmentation of Man's Intellect" in 1963, he found it discouraging that an idea of such high potential payoff to everyone on earth was met by exactly zero reprint requests after it was published. Today, he sends out more reprints of that paper in a week than he did for the first year after publication. Intriguingly enough, now that the hardware components of the system Engelbart worked on for decades are finally becoming commercially available, the social innovations he also forecast are emerging in the form of buzzwords like "computer supported collaborative work" and "groupware." If you want to see how these "new" notions fit into a larger framework, consider what Engelbart said about them in 1963.

"Augmentation" And What It Means

It all goes back to "augmentation" of human intellect, an idea that emerged from his original vision. In the early 1960's, there was much talk of "automation" — the now-familiar process by which machines, usually computer-directed, replace humans in fields, factories, and offices. Augmentation, however, doesn't use the computer to replace a human, but to amplify his or her mental capabilities. If you ask Engelbart what aug-

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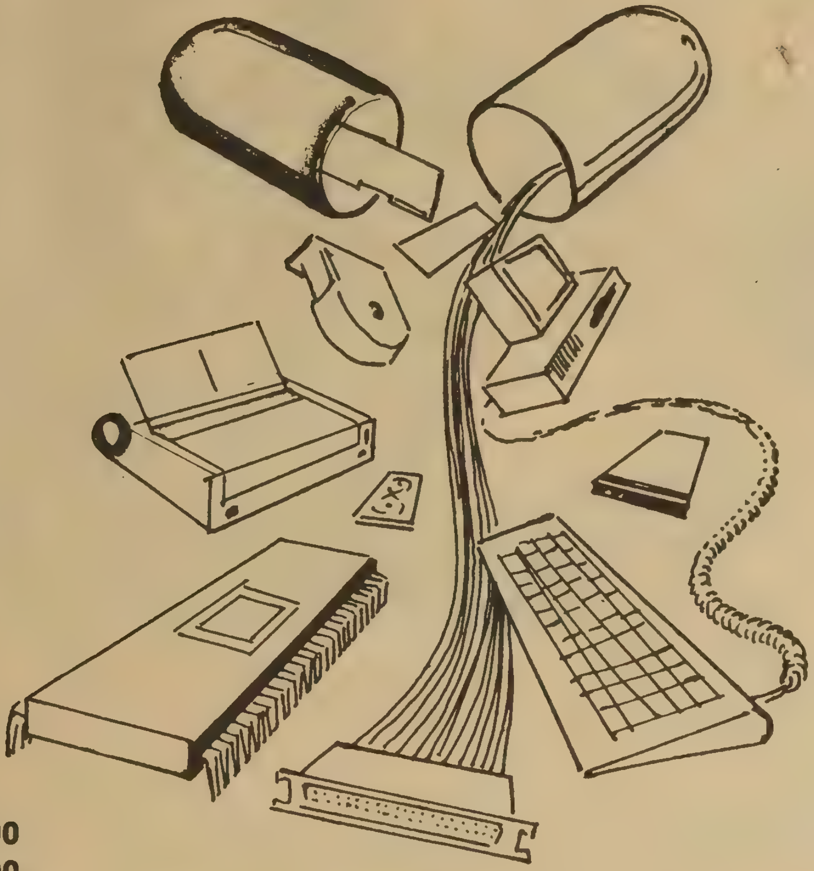

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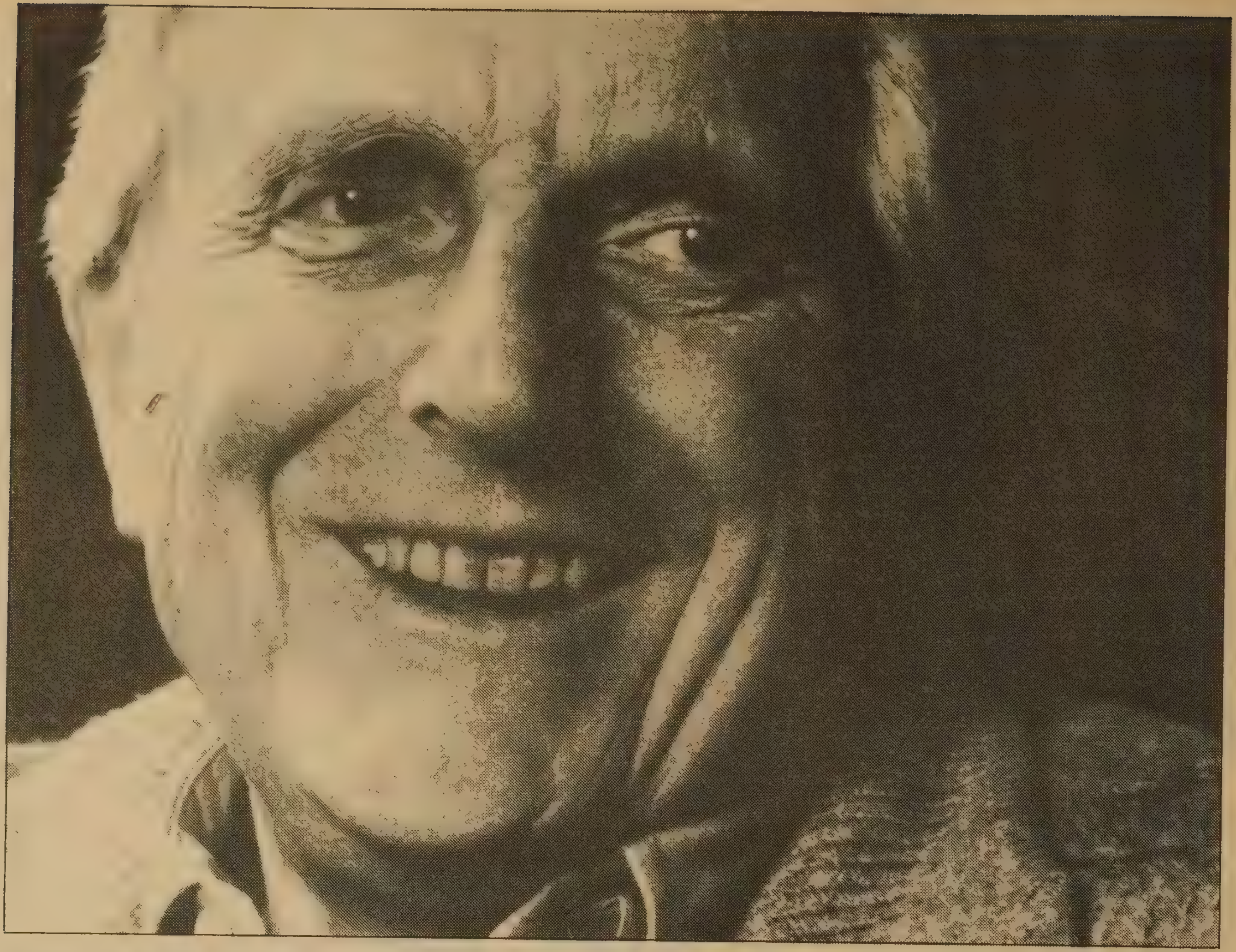

"Right now, hypertext people are crashing ahead to get something on the market, but they also ought to be thinking about the generalized use of products in the future, so they will be able to make use of each other's hypertext products, including the links."

mentation means, and if you are sitting in his office when you ask the question, he opens a drawer in his desk, hands you a pencil taped to a brick and asks you to sign your name. Then he hands you an unencumbered pencil and says: "There—you've been augmented." Metaphorically speaking, Engelbart's visions of computer collaboration tools have concentrated on removing the bricks from human thinking, communicating, and decision-making processes.

It was a tall order. Computer scientists, information specialists, educators found his idea impossible to grasp when he first started talking about it. Before he could build his first input device or write his first line of code, Engelbart had to conceive and communicate an entirely new way of thinking about the way people work as a preliminary to creating a new way to use computers. Read this passage as if it were written in 1988 instead of 1962 and see how it reads as a picture of the 1990s:

"By 'augmenting man's intellect' we mean increasing the capability of a man to approach a complex problem situation, gain comprehension to suit his particular needs, and to derive solutions to problems. Increased capability in this respect is taken to mean a mixture of the following: that comprehension can be gained where previously the situation was too complex; that solutions can be produced more quickly; that better solutions can be produced; that solutions can be found where previously the human could find none. And by 'complex situations' we include the professional problems of diplomats, executives, social scientists, life scientists, physical scientists, attorneys, designers — whether the problem situation exists for twenty minutes or twenty years. We do not speak of isolated clever tricks that help in particular situations. We refer to a way of life in an integrated domain where hunches, cut-and-try-intangibles, and the human 'feel' for a situation usefully coexist with powerful concepts, streamlined terminology and notation, sophisticated methods, and high-powered electronic aids."

It all sounds so fundamental and mundane now that it is hard to grasp how inexplicable his prophecies sounded to people in 1950. Computers then were pathetically puny compared to today's technology—the notion of multi-kilobyte main memories was science fiction. The word megabyte hadn't been invented. And computers were almost always used for ballistics calculations. Even elementary business data-processing was futuristic back then. And here was this fellow with his gaze on the horizon, talking about graphics and text and screens and problem-solving teams...

Engelbart was one of the first to understand that computers could be used as intellectual tools by a wide range of people, but he also maintained, then and now, that hardware and software are low-level components of the whole system he intends to augment. Human intellect uses tools, but the power of the human mind is not itself limited to the tools the human brain automatically provides. Normal humans are born with a power to learn. Parents, teachers, and communication media amplify that power. Language, tools, working methods, training, and education are all part of a system by which our culture augments our inborn intellectual capabilities. Engelbart meant to accelerate this natural evolution of thinking tools:

"The system we wish to improve can thus be visualized as comprising a trained human being together with his artifacts, language, and methodology. The explicit new system we contemplate will involve as artifacts computers and computer-controlled information-storage, information-handling, and information-display devices..."

Another thing Engelbart believed then and still firmly believes is that the integrated system he envisioned involves a lot more than creating hardware and software and training users. He always has been concerned with discovering how to adopt new ways of thinking as well as making familiar intellectual tasks faster and easier. Exactly how did he propose to use computers to boost intellectual capabilities? Engelbart pointed out that people organize our intellectual problem-solving tools in a kind of hierarchy, with simple "mindless" tools toward the bottom and "higher function" ones toward the top. He had a hunch that by tinkering with the right parts of this hierarchy he could change the whole system:

"It is likely that each individual develops a certain repertory of process capabilities from which he selects and adapts those that will compose the processes that he executes. This repertory is like a toolkit. Just as the mechanic must know what his tools can do and how to use them, so the intellectual worker must know the capabilities of his tools and have suitable methods, strategies, and rules of thumb for making use of them. All of the process capabilities in the individual's repertory rest ultimately on basic capabilities within him or his artifacts, and the entire repertory represents an integrated, hierarchical structure (which we often call the repertory hierarchy)."

As an example of such a hierarchy, Engelbart discussed the process of issuing a memo, a task that involves putting information in a formal package and distributing it. The reason for writing the memo, the memo writer's role in the organization, the intended audience are higher level components of the hierarchy. At an intermediate level are skills of marshaling facts, soliciting opinions, thinking, that go into composing the content, and all the communication skills involved in drafting it. Toward the bottom of the hierarchy are the tools used to prepare the memo and the medium by which it is communicated — typewriter, pencil, paper, inter-office mail.

Engelbart proposed a hypothetical method for boosting the effectiveness of the whole system by introducing an innovative technology into a relatively low level of the hierarchy. "Suppose you had a new writing machine," he wrote, "a high-speed electric typewriter with some very special features:

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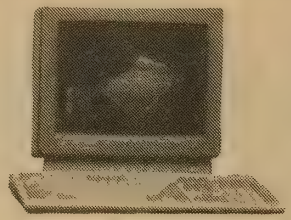

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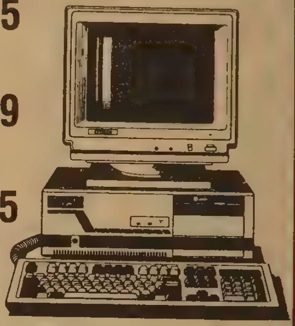

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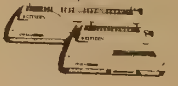

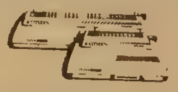

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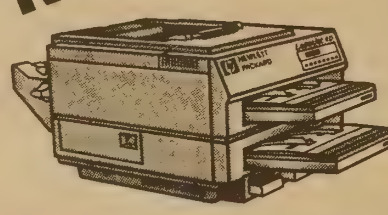

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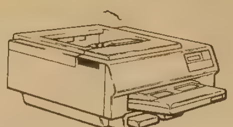

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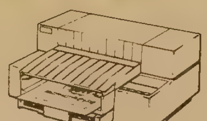

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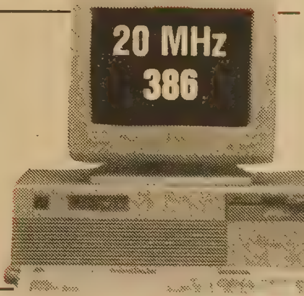

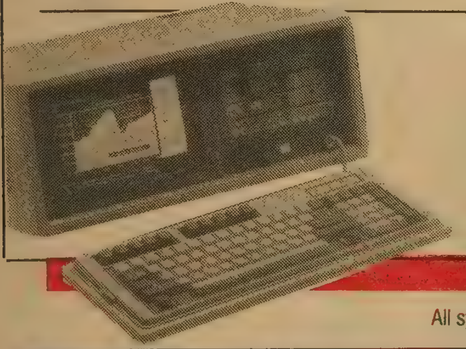

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"The important thing to appreciate here is that a direct new innovation in one particular capability can have far-reaching effects throughout the rest of your capability hierarchy. A change can propagate up through the capability hierarchy, higher-order capabilities that can utilize the initially changed capability can now reorganize to take special advantage of this change and of the intermediate higher-capability changes. A change can propagate down through the hierarchy as a result of new capabilities at the high level and modification possibilities latent in lower levels. These latent capabilites may have been previously unusable in the hierarchy and become usable because of the new capability at the higher level."

Engelbart proposed that the use of computers to augment human thinking represents a new stage in the evolution of human intellectual capabilities. The ability to think, to manipulate concepts, based in the biological capabilities of the human brain, was the first stage. The next leap forward followed the discovery of methods for manipulating symbols—speech and writing. The printing press brought machines into the process and accelerated all kinds of revolutions worldwide. Engelbart's example of a computerized typewriter was an instance of the coming fourth stage made possible by the application of computers to the processes of thinking and communicating:

"In this stage, the symbols with which the human represents the concepts he is manipulating can be arranged before his eyes, moved, stored, recalled, operated upon according to extremely complex rules—all in very rapid response to a minimum amount of information supplied by the human, by means of special, cooperative technological devices. In the limit of what we might imagine, this could be a computer, with which individuals could communicate rapidly and easily, coupled to a three-dimensional color display within which extremely sophisticated images could be constructed, the computer being able to execute a wide variety of processes on parts or all of these images in automatic response to human direction. The displays and processes could provide helpful services and could involve concepts not hitherto imagined (e.g., the pregraphic thinker would have been unable to predict the bar graph, the process of long division, or card file systems)."

Admittedly, it doesn't sound that esoteric today, but it did sound esoteric to just about everybody for the first couple of decades Engelbart talked about it.

Engelbart Now

What is he talking about now? Over the last few months, Engelbart has been meeting with old and new colleagues about an unfinished agenda he is preparing to present to the world again, now that the world seems to be ready for it. I attended several of these meetings, and in conversations at his house and mine, and via email and telephone, we talked about the broad outlines of his next vision.

Doug Engelbart chooses his words carefully. And he insists on looking at whole systems even when you ask him to show you a part. Again and again during our discussions, he declined to define something unless he was given another 20 minutes to define the rest of the system the "something" was part of. Right now he is working, slowly and painstakingly as ever, to articulate his new vision with the same precision he put into his 1962 "Framework" and at great enough length for the whole paradigm to be clear. He has been willing to speak very generally about some of the issues raised by "the bootstrapping strategy."

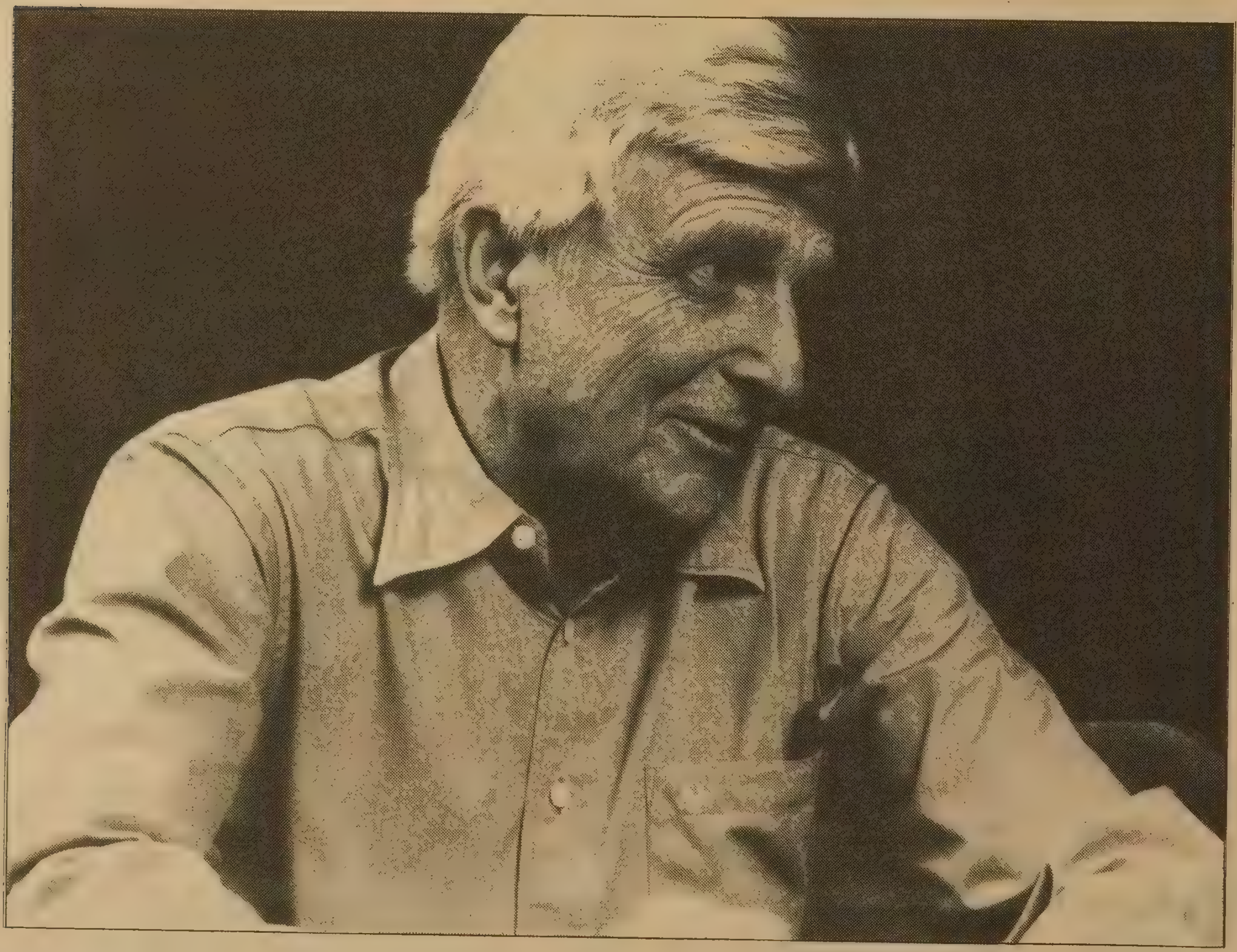
Briefly, Doug Engelbart is saying that it is time to pay attention to the way organizations and information technologies co-evolve. Just as the computer interface evolved and enabled people to use computers to do their old jobs in new ways — and do new jobs that weren't possible without computers—it is time for organizations to evolve in conscious response to the "augmented knowledge workshops" in their midst.

Doug, what is your vision today?

In many ways it is the same: people use computers and other technologies, along with new methods and languages, to solve problems together. And they do it systematically, so they can evolve their methods and languages as their technology evolves. In 1963, the challenge was to build the technology. But if you go back to the papers I wrote in 1962 and 1963, I was explicitly talking about organizational change along with technological change. In the '60s I did a lot of thinking and some writing about the need for communities to get involved in the evolution of tools and toolmaking environments.

I still think it's a good idea. I don't think it is accurate to say that organizational change — new roles and methods and structures within and between organizations — had to wait for the technology to advance. Technology was not the main constraint. People's attitudes were the main constraint. Sure, technology has evolved, but to me it is more significant that people's attitudes have changed. That's one reason why I think the time is ripe for looking at planned coevolution. As companies look at the problems of selecting and installing extensive and expensive information technologies, they are understanding that they also have to plan for the cultural and organizational changes that are going to accompany the technology.

It's not just that people are seeing elements of the old vision that they didn't see before. Organizations are beginning to think about how they are going to respond to the cultural changes triggered by the technology. The increasing complexity of the



"Augmentation doesn't use the computer to replace a human, but to amplify his or her mental capabilities. Metaphorically speaking, Engelbart's visions of computer collaboration tools have concentrated on removing the bricks from human thinking, communicating and decision-making processes".

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global business environment is also forcing organizations to look for ways to manage change. The field of organizational development came along and more recently organizational transformation came along. Organizations of all kinds now regularly hire specialists to help them change and help them deal with change. At the same time, many of the same organizations are also installing sophisticated computer and communication technology. The real leverage is in building it all into one integrated system.

So a lot of my current concern is focused on the same drive that got me started in 1950, the recognition that the world is getting more complex at a higher rate and we need new capabilities to deal with that. Organizations are the vehicle by which people tackle complex problems, and the kind of technologies and methodologies I was talking about in my framework are tools for tackling complex problems. The real power of the system lies in cultivated coevolution of technology and organization, tool, and role. That's where the bootstrap strategy fits in.

"Bootstrapping" is another term you used way back when, and you seem to be using it frequently nowadays. What do you mean by "the bootstrap strategy?"

I guess it has been one of my favorite themes since I was a kid and read that Paul Bunyan could lift himself up by his bootstraps. In engineering, the term "bootstrapping" describes the process wherein the results of a given effort are fed back into the activity in a reinforcing way, so that less internal energy is required thereafter to achieve bigger and faster results. When we started building our augmentation research center, we set out to build hardware and software tools and develop methods that would help us design and build new hardware and software tools and methods, and we were consciously committed to continually learning how to use new systems. That was one kind of bootstrapping.

I often look for the point of maximum leverage. That's what got me into thinking about computers as problem solving tools in the first place, because I saw they could give people leverage with the complex problems I saw coming. If you are thinking about augmenting individuals and groups within an organization, and you want to evolve this augmentation with the highest degree of leverage so that the entire organization gains maximum benefits, what you do is begin by augmenting the organization's ability to evolve.

What do you mean by "coevolution"?

Whenever you have a system with interdependent subsystems, and you observe the larger system evolve, you realize that what goes on in one subsystem affects what goes on in the other. But it has been happening haphazardly. When you pursue augmentation of individuals you have to look at the way methods and roles will change. You can't get there simply by automating your old methods and leaving it at that. You have to find the best new methods to use the evolving technologies. The two subsystems of human systems and technological systems are interdependent. You have to give coordinated attention to the simultaneous opportunities and needs that emerge.

Augmentation is more than just the tools. Look at the way the whole system changes when you are changing one of the parts. Look for the coevolutionary response.

You seem to envision groups of people working together pretty universally, workstation to workstation. The assumption underlying that vision is that some kind of universal data interchange and integration is essential to taking advantage of augmentation on a society-wide scale at a level we don't see in today's fragmented and competitive hardware and software market. What do you think needs to happen in terms of industry standards for this basic systems architecture level of your old vision to come true?

I'd like the standards committees to think in terms of the future. They are discussing document content architectures now—standards that will enable me to send you a document and you can print it out, regardless of our equipment. But they need to also think about what you do about a hypertext document and you want to make links universally available. Hypertext in the sense I've always used it means links, and in the augmentation systems I've used, I can send you a link that points to part of another document. Those links and pathways have to be expressible across different systems.

Right now, hypertext people are crashing ahead to get something on the market, but they also ought to be thinking about the generalized use of products in the future, so they will be able to make use of each other's hypertext products, including the links. We need a serious dialogue about the universal requirements for hyperdocument architectures.

There is a long history of standardization in the communications business—different telephone companies agree on standards to make a universal network. Now we need a universal hyperweb.

"Hypertext" certainly isn't an esoteric term anymore. One of the new buzzwords is "groupware." That sounds rather Engelbartian. Would you care to comment?

As I understand it, "groupware" is a name for kinds of software that provide for cooperative capabilities among a group. It's too new to know what the creators or users of these terms have in mind, but I do know that beyond the hardware and software you need a methodology for working together—in fact, when you get started, you need a methodology for learning how to work together. That's where your first pilot projects and bootstrapping teams will come in.

One way to describe this stage in development is to compare it to the way the Japanese rebuilt their industrial infrastructure after World War II. Faced with building from the ground up, they deliberately decided to concentrate their first efforts on building tools that make machine tools. When their first industries began to tool up, their tooling-up capabilities were tremendously augmented. The whole industrial infrastructure had an incredible flexibility, and we can see how that has paid off.

That's how we should approach computer-supported cooperative work in organizations: we need to think about building the tools to build the tools. Sure, we can boost people's productivity by using the tools and methods that now exist, but in terms of the system that is going to give you maximum leverage for everybody, it's too early to buy solutions off the shelf. We have to build prototypes and pilots and learn how they

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work, just as we did with the user interfaces we built at SRI ARC in the 1960's and 1970's.

How about "high-performance teams?"

Prototype organizational units or pilot teams are a big part of what I think needs to be done, because it is very expensive to change a whole organization to a new kind of configuration, and it is too hard to make a realistic laboratory simulation. So the organization needs prototype units within it that scout ahead—people get equipped and start learning. I think this is an important part of a viable approach to this evolution. Some of these prototypes you want to put way out in front. These teams would be specially recruited.

A natural kind of pilot is a group that is already working together on some mission. Give them the tools and the training and help them retool to do their job better and start teaching others how they did it. Start moving them ahead. Besides that natural kind of pilot, however, it is imperative that you make more intentional pilots and go way out there, beyond the way they do their jobs today. You probably will have to take them offline for a number of months to get them ready. They have to be committed to retooling on the fly, and retooling again, although it might be tempting to stop and devote the new capabilities exclusively to doing their old jobs better. You want to find people who are enthusiastic enough about the idea to agree at the outset that they are going to go through basic training and conditioning and the stress of change.

People can elastically accommodate only so much change. The people part of a natural pilot will only bend so far. That limits how far you can get people to move in any one step. It isn't easy to keep up with your old responsibilities within an organization when you are trying to break through to entirely new ways of doing things. When the first person gets uptight about the pace of change, it signals trouble for the group. Which is why it is imperative to explore further out with intentional pilots.

As a special kind of intentional pilot, I often think of a very high-performance team. Of course, if you are going to create such a team, you need to be clear about their tasks and roles: What job are they supposed to perform highly at? Becoming outstandingly effective at facilitating the handbook cycle of a working group or project is the target role for a high performance team that I come back to time and again when I think through this. A high performance team that becomes skilled at bootstrapping the handbook cycle is the highest leverage place to augment in an organization.

What do you mean by "bootstrapping the handbook cycle"?

A "handbook," in the sense I use it, is the term I give to that which exists in every project and is important, but is often not explicit or even noticed. Every mission-oriented group builds for itself an organized body of knowledge that represents the accumulation of what they've learned in the pursuit of their goal. It includes all the stuff in the procedures manual and all the stuff that isn't in the procedures manual. At any time there is a body of knowledge that represents the current status of the understanding of the group. Plans, decisions, commitments, contracts, records of meetings, documentation, designs—the entire, integrated body of knowledge that represents the status and direction of the project—is part of the handbook. A lot of that often is carried around in people's heads.

The task of many projects is to evolve their handbook to its final state. "The handbook cycle" is my way of giving a name to the process of evolving a handbook, to make it explicit and target it for bootstrapping. At any point in the development of a project, there are ways to look at the state of the handbook, and to propose, debate, and decide upon ways to improve the handbook.

Through this collaborative knowledge-work process, the handbook takes shape. Can you build a high-performance team whose task is to be better at supporting the evolution of handbooks? What would it do to an organization to plunk these teams into different working groups and help those groups evolve their handbooks more effectively. Can these super support teams help larger project groups to do better in regard to structuring and organizing, integrating commentary and dialogue into the process? That cycle of having a lot of recorded dialogue and testing and integrating into the next level of the handbook is how knowledge evolves in organizations anywhere. The handbook cycle is precisely where you can gain your highest-leverage bootstrapping—not only do you boost your capability to do your designated task, but you boost your capability for boosting your capability. ❑

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- CLOCK/CALENDAR
- MONOGRAPHICS
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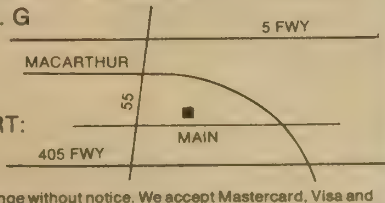

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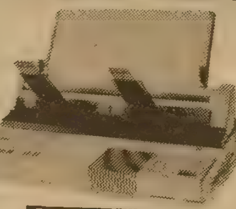

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Brother M1709 — Hi-speed 240 cps (50cps NLQ), 136 column, large 24K buffer. Unique push tractor with paper parking feature. List $749. . . .Sale $419

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LQ-1050 — 24-pin, 132 col . .	$769

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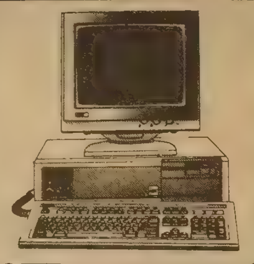
Toshiba P351SX — 360cps. . . .	$965



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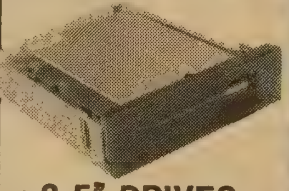
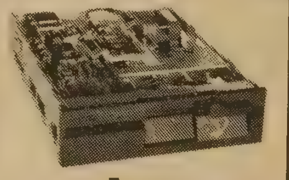


3.5" DRIVES

Sony 720K drive	$99
Sony 1.44-MB drive.	$115
Toshiba 720K drive.	$99
Toshiba 1.44-MB drive	$115



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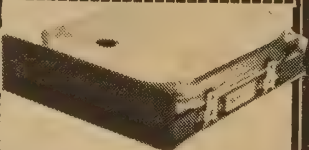
Fujitsu 360K drive	$75
Fujitsu 1.2-MB drive	$99
Teac 360K drive.	$89
Teac 1.2-MB	$99
Toshiba 360K drive.	$79
Toshiba 1.2-MB drive.	$99



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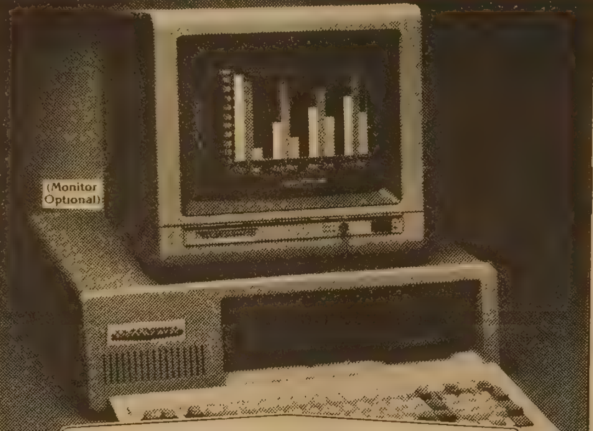

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ENTERPRISE XT-TURBO

- Fully IBM PC/XT compatible
- 640K on mother board
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	640K memory 1-360K drive	2-360K and 20-MB Drives	2-360K and 30-MB drives	2-360K and 40-MB drives
10MHz	$639	$979	$1009	$1179

(Monitor Optional)

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- Fully IBM AT compatible
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- Controller for floppy & hard disks
- 1.2-MB floppy drive
- 101-key enhanced keyboard w/LED's
- Keyboard speed selectable
- 200-watt power supply
- 8 expansion slots
- Clock/calendar with battery
- Full 1-year warranty

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monitor optional

ENTERPRISE 386

- 16-MHz zero wait state operation
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Compact & lightweight
Weighs approx. 20 lb.

- 12-MHz, Intel 80286-12 processor
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Toshiba T1200HB, backlit. . .	$2250
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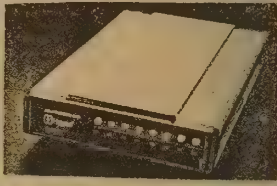
Toshiba T3200, 12MHz, 40MB	$3450
Toshiba T5100, 16MHz, 40MB	$4450
NEC Multispeed EL 2 drives.	$1495
NEC Multispeed EL,1dr. 20MB	$2295



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Hayes 1200B internal w/Scom	$275
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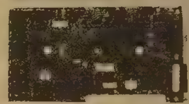

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RS-232 serial card.	$29
Parallel printer card.	$25
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Hercules In-Color card	$199
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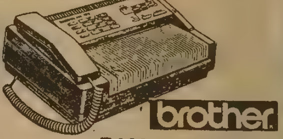
Samsung 14" RGB Color w/base	$259
Samsung 14" EGA Color.	$375
Taxan 765 14" EGA Color . . .	$395
Taxan 770 Multisyn Color	$575
Taxan 860 — 16" Supervision .	$579
Thompson 14" RGB Color . . .	$289
Thompson 14" Multisyn color	$545



brother

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FAX-195 — similar to FAX-150 but with remote beeperless answer machine $1025

IBM

PS/2 Model 30 — 2 drives	$1275
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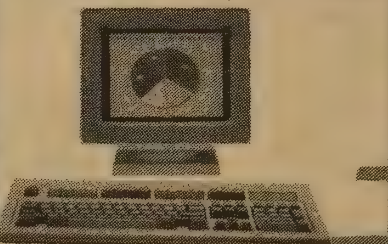
PS/2 Model 60 — 1 dr., 44-MB	$3095
PS/2 Model 60 — 1 dr., 70-MB	$3585
PS/2 Model 80 — 1 dr., 44-MB	$3895
PS/2 Model 80 — 1 dr., 70-MB	$4650



COMPAQ

Compaq portable 2, Mod. 2 .	$1895
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Portable 3, 40-MB, 640K. .	$3895
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Despro 386S Mod. 1	$2895
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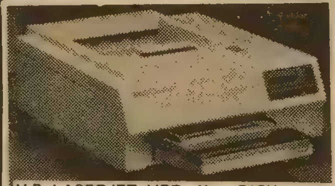

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H-P LASERJET VER. II — 512K memory, 8 page/minute, 300x300 dot resolution, 6 resident fonts . . . . $Call

BROTHER HL-8 LASER PRINTER — 1 MB memory, 8 page/minute, 300x 300 dot resolution, 20 resident fonts. 16-character LCD display gives instruction to user, H-P compatible (same Canon engine as H-P) . $ $Call

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MAC @ WORK

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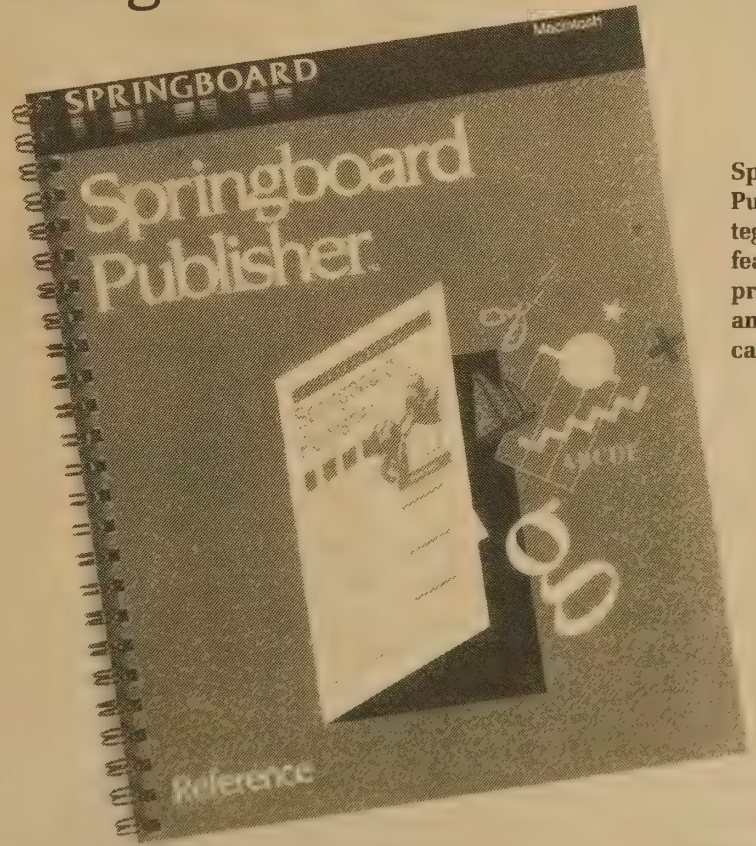
Making The Springboard Jump

Springboard Publisher Brings Low-Cost DTP To The Masses

By Tony Rocco

Desktop publishing is coming to the masses in simpler, inexpensive programs that give the less-than-professional desktop designer ample means of producing business reports, newsletters, brochures and flyers. Costing much less than the likes of *PageMaker* 3.0 and *Quark XPress* 2.0, such programs offer a surprising range of features in an easy-to-use, affordable package.

One such application is *Springboard Publisher* from Springboard Software, Inc. Billed as a combination word processor, desktop publishing and graphics application, *Springboard* promises to do quite a lot for under $200. While it delivers on most of its claims, I found the program's chief strong point to be its layout capabilities, not its word processing or graphics features. In fact, while you could conceivably use *Springboard Publisher* as a stand-alone word processor, you would soon become fed up with its many limitations.



Springboard Publisher is an integrated package featuring word processing, DTP and graphics capabilities.

As a word processing program, *Springboard Publisher* makes *MacWrite* look advanced. It has no style sheets, no spell checker, no keep lines together, no soft return and no keyboard commands for many functions (a problem with the application in general).

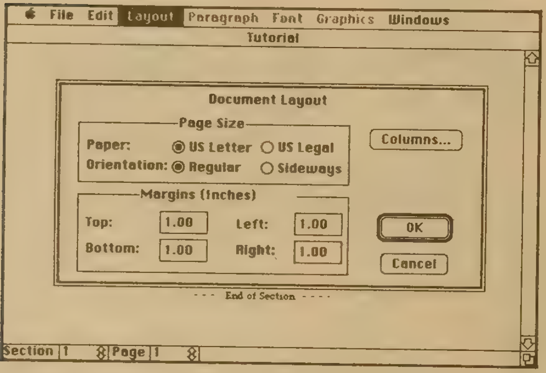
Lest I sound unduly harsh, it really doesn't bother me that *Springboard* is not a full-blown word processor. As long as you don't buy *Springboard* thinking that it will satisfy your word processing needs, you won't be upset by its somewhat exaggerated claim to be a word processing application. Its page layout capabilities alone are worth the price.

A Couple Of Surprises

Springboard Publisher is not the high priced spread. It isn't meant to compete against *PageMaker*. Imagine my surprise, then, when I discovered a feature commonly associated with more sophisticated page layout programs. Text wrap-around. Yes, you can flow text around graphics in *Springboard Publisher*. You can even move a graphic around from one place to another in the text and have the text automatically flow around it. It took Aldus three tries to come up with a version of *PageMaker* that had text wrap-around. The wrap-around feature isn't quite as slick as it is in *PageMaker*, mind you, not allowing you the same precision. Nor does it give you any options about *how* the text wraps around. By this I mean you don't have the options of making text stop when it gets to a graphic and resume on the other side of it, or stop when it gets to a graphic and resume in the next column. But it is useful nonetheless.

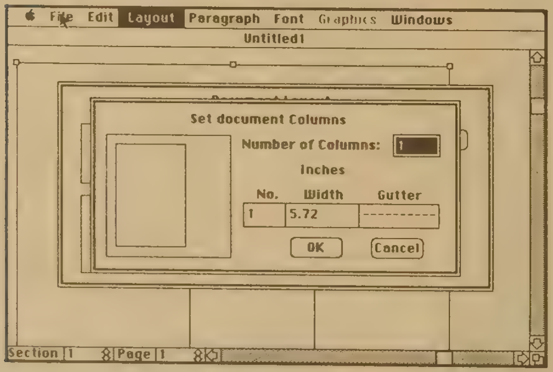
Another thoroughly likeable feature of *Springboard Publisher* is automatic text flow. When you import text from one of the three file formats *Springboard* accepts, *MacWrite*, *Word* or ASCII, the application automatically creates the number of pages necessary to accommodate the text. It then fills those pages. Note: *Springboard* cannot import documents it has created. This means that to bring in text created in *Springboard* you must open the document and cut and paste. No big deal, but it would be easier to simply import the text without opening the document.

Should you be interested in using *Springboard* to create a manual or other book-like publication, you will likely find the application well suited to the task. *Springboard* allows you to segment a document into discrete sections so that you can work with one chapter at a time. And you can create a document with as many pages as you have disk space for.



Paper: ● US Letter ○ US Legal
Orientation: ● Regular ○ Sideways
Top: 1.00 Left: 1.00
Bottom: 1.00 Right: 1.00

Setting up page dimensions, orientation and up to nine columns per page is easy.

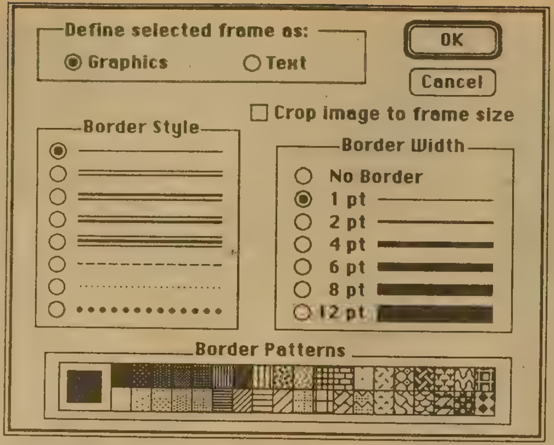


Number of Columns: 1

No.	Width	Gutter
1	5.72	---------

Using Springboard

If you've used other desktop publishing applications, you know they all have different ways of doing things. In *Springboard Publisher* you'll need to accustom yourself to creating and working within boxes which hold either graphics or text. It's an easy concept to get used to and fairly intuitive. You begin, as you would in any program, by setting the page size (either 8 1/2" by 11" or 8 1/2" by 14"), orientation, margins, columns (up to nine) and distances between columns. Dialog boxes make this an easy task. Background text boxes are created automatically.



Define selected frame as: ● Graphics ○ Text
☐ Crop image to frame size
○ No Border
● 1 pt
○ 2 pt
○ 4 pt
○ 6 pt
○ 8 pt
○ 12 pt

When you create a frame you must first define it and choose border options.

Text and graphics boxes can be precisely located on the page with rulers set in either inches, centimeters, picas or pixels/points. You may also activate a Grid command to assure precise alignment. The grid can be set at intervals from .014" to 4.25". *Springboard* also displays X,Y coordinates in pixels/picas for very exact sizing and placement.

To make a box active, you either click or double-click on it. Double clicking on a text frame makes it possible to directly enter text. Clicking once makes it possible to flow text in from a word processing document. Double clicking on a graphics frame brings up a *MacPaint*-like set of tools for creating or editing graphics. Clicking once allows you to enter clip art or a prepared graphic. *MacPaint*, *FullPaint* and PICT are supported.

I found it delightful to be able to link text boxes. Let's say you're creating a newsletter with sidebars in it. The main body of text would be held in the backgound text frames (which don't require special linking), with sidebar text in smaller boxes scattered throughout the document. By utilizing *Springboard's* linking feature, you simply import text into the first one and have it flow to the other boxes linked to it. Pretty neat, assuming the text in all the sidebars is related.

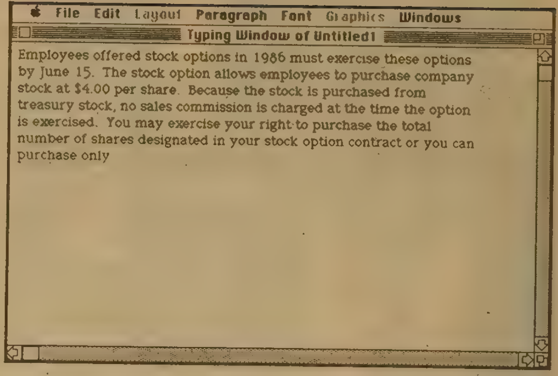
It is also an easy matter to add or delete pages and to extend existing column and box setups to newly added pages. Basically there is only one page view that is suitable for working in: full page. Unfortunately, in full-page view you cannot have two facing pages to work on at once. It would be quicker and easier to be able to scroll across two pages rather than having to clear the screen of one page to bring up another. *Springboard* allows you to view two pages at once in thumbnail size, and even create boxes in this mode, but it is not usually practical.

Almost Outstanding, But...

Springboard Publisher comes close to being an outstanding DTP application for producing simpler documents like informal brochures and newsletters, flyers, business reports and menus. It has a couple of shortcomings, however, that detract from its ease of use and functionality.

Speed has never been a strong point of page layout programs, but *Springboard* is slower than most. You may find your patience tried quite considerably when doing most anything in *Springboard Publisher* (unless you're on a Mac II). I would like to see the application speeded up somewhat.

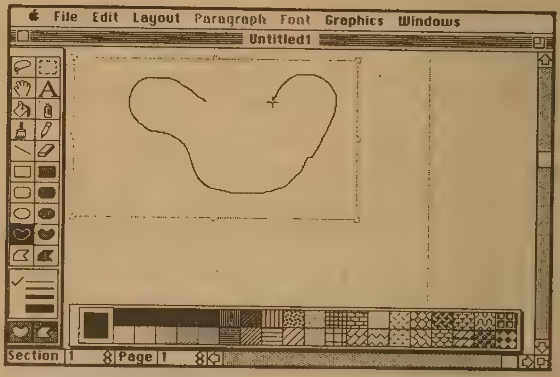
The program's second failing is the rather awkward way in which text fills are implemented. My first impression was that text fills (tints or shading placed behind text as a background to help differentiate one body of text from another) were not possible in *Springboard*. They are not explicitly discussed in the tutorial or reference. In fact, a call to tech support seemed to confirm that text fills were not possible. After corresponding with Matthew McClure from the development team, I was informed of a way to use the application's text wraparound feature to produce background fills. It's a little more complex than just creating a text box over a graphics frame, but it works.


File Edit Layout Paragraph Font Graphics Windows
Typing Window of Untitled1

Employees offered stock options in 1986 must exercise these options by June 15. The stock option allows employees to purchase company stock at $4.00 per share. Because the stock is purchased from treasury stock, no sales commission is charged at the time the option is exercised. You may exercise your right to purchase the total number of shares designated in your stock option contract or you can purchase only

A Typing Window allows quick text entry.

Springboard Publisher comes close to being an outstanding DTP application for producing simpler documents like informal brochures and newsletters, flyers, business reports and menus. It has a couple of shortcomings, however, that detract from its ease of use and functionality.



Graphics capabilities consist of MacPaint-like drawing tools.

My overall impression of *Springboard Publisher* is that it makes a nice low-level DTP application for use by non-professionals. It is easy to use, comes with an excellent tutorial and reference and has a few surprising features—along with a couple of surprising failings. If its authors can address these failings, *Springboard Publisher* would be an amazing value for under $200. (Springboard Software, Inc., 7808 Creekridge Circle, Minneapolis, MN 55435. (612) 944-3912. ■

BMUG

BY DAVID MORGENSTERN

MacTurkeyFest, Steve Jobs Comes To BMUG And The Year In Review

Welcome to the BMUG column. This month we've got BMUG memories from the past year and some tips and information to take into the new.

Wholly BMUG

What's better than Monday Night Football? The weekly BMUG main meeting! Luckily Mac gridiron fans never have to make the choice, since the meeting is on Thursday. We have visiting software marketing teams dropping the ball. It's a double-tasking game, where everyone is a referee and a player simultaneously. The ever-faithful crowd at the meeting will tell you that BMUG never *Scores!*

TurkeyFest—No Turkey!

The BMUG TurkeyFest (a.k.a. MacToberFest) was a great success. Thousands of visitors flooded into the spacious hall above the Berkeley Student Union. The main ballroom held dozens of Macintoshes (provided by the manufacturer), while seminars on file recovery, desktop publishing and other good stuff convened in a conference room.

This festival is a chance for members to show everyone what they're doing with their software. Everyone was impressed and proud of the endless variety of software the BMUGers use—everything from scientific programs, illustrations and databases, to the latest games, *HyperCard* and MIDI music software.

The Fest is also a great time to get some answers to those questions that have been on the back-burner simmering. At the TurkeyFest you could not only get your question answered, but talk to the programmers writing your software. If they don't have a current solution to your problem, you'll see it in the next release.

The NeXT Congregation?

After the meeting came the weekly BMUG main meeting featuring our surprise mystery guest, Steve Jobs. A line stretched for a block downhill from the lecture hall's double doors. Hundreds of people waited in the cold night air for the first public demonstration of the NeXT computer!

It was fantastic to see both the new NeXT computer in action and Saint Steve of the Forbidden Fruit and Black Cube in the flesh. The crowd was on pretty good behavior for one of the exalted Macintosh Saints. Jobs said, "If you have any questions, I'm sure you'll jump right in." We did.

He was enthusiastic about his new baby. But whenever Jobs had to say the A—le, or the Mac——sh words, his eyes got hard and his jaw tightened. Liz of the BMUG business office thought it was the same feeling you'd get if you'd hear that your ex-spouse had done something great—a combination of pride and anger. He didn't want to talk one bit about the Macintosh, other than to say it's a has-been now that the NeXT is off the drawing board.

Get A Jobs

Jobs gave the Davies Symphony Hall Coming-Out spiel for BMUG, including the NeXT board manufacturing video and computer history slide show. He was surprised by a sudden roar of boos over a slide of Stanford—one week before the Big Game.

Unlike the look-but-don't-touch press party, BMUG members got to play with the new toy. Our hardware crew surrounded the NeXT laser-printer and popped-off the top!

TIP: ☞

Ken Peterson, the Portland MUG's techie, tested a bunch of labels for use in LaserWriters. The Plain-Bond Copier Address Labels by Instant-Stik (#M-5354) worked the best. On each sheet there are 33 labels measuring 1" by 2 3/4". Hand-feed them to a LaserWriter and use the fold-out collection tray on a LaserWriter II.

> **The NeXT machine, with built-in digital audio, microphone and software, makes it easy to send large sampled voice-mail messages to your co-workers and NeXT buddies around the world. Shall we start a betting pool to guess how many NeXT machines it will take to overload the international UNIX-based networks? "All together now—Happy birthday to"—Click.**

It's easy to see why military purchasing is so wild—it's easy to believe the hype. After a slick presentation and a video or two, you believe you're seeing history, not a projection into the future. It is a marketing plan, a ßeta machine, still cooking in the oven. There is no real hardware or software for us—yet. To even be in the running to buy one this year, your name has to end with University.

The NeXT machine, with built-in digital audio, microphone and software, makes it easy to send

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Copyright © 1988 by David Morgenstern. David Morgenstern is a Bay Area "MacNurturer" and BMUG member. David is DMORGENSTERN on GEnie and himself at (415) 641-7352.

large sampled voice-mail messages to your co-workers and NeXT buddies around the world. Shall we start a betting pool to guess how many NeXT machines it will take to overload the international UNIX-based networks? "All together now—Happy birthday to"—Click.

If the system isn't brought down by trying to swallow all these voice-mail hairballs, it may suffer a headcold. The *SendMail* program was the introduction site for the early November UNIX virus attack. Jobs said that NeXT was affected by the virus.

The demonstration included the *Application Builder* software, an object-oriented programming environment. It is a very impressive and powerful set of tools for quickly creating programs. There can be no doubt that just as *HyperCard* is for the Macintosh, *Application Builder* will be a great source of bad programs for the NeXT computer.

Intellectual Property Protection (With Class)

Sometimes programs have a shorter half-life than the atom-smashed elements floating downhill from the Berkeley laboratories. Ask Rick Scherle, a local independent consultant on product design, and *HyperCard* developer.

After the NeXT announcement in October, Rick wrote a program called *Browser*. It made the Macintosh DeskTop look just like the NeXT interface. It was not a Finder substitute, like *Minifinder* or *PowerStation*, with the ability to launch programs; however, it could open and close folders. Everyone at BMUG thought it was a trip and it was put on the Bulletin Board.

Soon thereafter, one morning, Rick got a call saying, "Hi Rick, this is Steve Jobs." Steve wanted to talk about *Browser* and made an offer that couldn't be refused—a tour of the NeXT offices. He went down to NeXT and had an "extremely cordial" meeting with the Living Saint. They discussed the NeXT interface design and put the machine through its paces. But they weren't happy about *Browser*.

NeXT was primarily concerned about infringements of its intellectual property. They also didn't want anyone to confuse the origins of the program, since its icon was the NeXT cube. Bye-bye *Browser*.

The Year That Woz

What a year this has been for BMUG and the computer world. To celebrate the new year we've put together a list of kudos and menudos:

- **Best Support of Color.** *Wingz* by Informix. This spreadsheet has been in ßetaville (beta is software development talk for an almost finished program that is being tested) for more than a year. They have had large and impressive booths at the past few Macworld Expos. The best thing about the booths are the colored bags they hand out to people that survive their marketing pitch. First it was a red bag, then black, then red again and now yellow! Isn't venture capital wonderful?

- **Best Pantomime Virus.** *DeskTop Manager.* When is a virus not a virus? When it's Apple System Software! The Macintosh operating system has problems with large numbers of different applications or files on a single volume—like the new Apple CD-ROM drive, or an 80 megabyte or larger hard-disk drive.

The trouble is with the Desktop file, an invisible file that hides on your disks. It remembers every icon it's ever seen, type and ID numbers of applications, and the folder IDs of applications. All this information requires a number of bytes for each item remembered. On the big drives this can add up quickly.

Unfortunately, the Desktop file currently has limits to the amount of stuff it can keep track of—usually around 288K. The closer you get to the 288K desktop file limit, the more trouble your Mac will have in keeping track of what's what on the disk. If you hit 288K—Crash!

Apple is testing an AppleShare Init called the *DeskTop Manager,* which splits the desktop file into pieces. One new problem with this software is that it places invisible files on every volume it can find—even if you aren't using the *DeskTop Manager* on your system. Just like a virus—No?

- **Best Computer Bath-Toy.** Richard Brandow and the balsa wood Laguna laptop. Richard Brandow is the publisher of the Canadian Macintosh magazine, *MacMag*. He is better known as the creator of the Universal Message of Peace virus. This was the harmless virus spread around the world by Marc Canter's MacroMind demo for the graphic program, *FreeHand.*

Last June at a Mac Montreal User's Group meeting, Brandow presented a "prototype" of the Apple Laptop, code-named Laguna. It turned out to be a balsa wood mock-up with an acetate transparency of the Finder glued to the screen. The press had been prepared for a blockbuster event, but instead were treated to a blockhead.

They knew how to get to the truth in the Middle Ages. Throw the computer into a pond. If the machine sinks, it's a real laptop. If it floats, it's a witch.

- **BMUG Meeting Quote of the Year.** While demonstrating the features of *HyperCard* 1.2, Bill Atkinson (the creator of *HyperCard*) said, "It's easy to get a 200 to 1 speedup in a program when you stop doing something stupid." Give us a break, Mr. Macintosh genius programmer!

I'm™ Sorry™ !™

Last episode, I mentioned that the NeXT™ computer uses a floptical disk drive. I have now been informed that the word Floptical™ is owned by drives made by Insite Peripherals (the NeXT drive is made by Toshiba). The drive uses an optical servo-mechanism, but reads and writes data magnetically. It uses high density 3.5" floppies with special optical tracks that allow 20.8 megs of formatted storage. The OEM price on the drive will be $250. Insite Peripherals, 2363 Calle Del Mundo, Santa Clara, CA 95054.

Hum A Version and I'll Fake It

The computer is both the delight and the bane of the perfectionist. With software you can keep fiddling and fine-tuning your work until it's "just right." Of course most people can't recognize when fine-tuning becomes homogenization. Programmers know that no matter how hard they look and test, there will always be one bug left in the program.

If you had some need to chart your progress in a task, you could chronicle every little change to your work. Each modification could be archived as a separate document. This is common practice when playing computer games. Recovering from fatal

What Is BMUG?

Good question. BMUG is an educational non-profit corporation promoting the exchange of information. Like any growing organization, it is many different things to its 4000+ international membership.

BMUG, Inc. is a computer user group located in Berkeley, California. The group specializes in computers using a graphic interface. For a while that meant the Macintosh™ but now includes other makes, models and operating systems. BMUG supports many Special Interest Groups (SIGs), a five-line BBS, help-line, software library, weekly meetings and much more. BMUG also puts out a semi-annual 300 page book that we call our "newsletter." Our motto continues to be: We*'re in the business of giving away information.*

Come and join in the dialogue every Thursday evening, 6:00 pm - 9:00 pm (or whenever we finish), in the Physical Sciences Lecture Hall on the U. C. campus.

The BMUG Help Line, (415) 849-HELP, provides technical assistance and telephonic handholding during business hours (9:00 am - 6:00 pm). If your question can't be answered on the spot, we try to get you in touch with someone that can help. Of course, not every problem can have a happy ending—but we try.

BMUG has many great Special Interest Groups (SIGs). They're a great way to meet people doing or trying to do the same things you are. They include the Alpha/Beta SIGs (for new users and not-so new users), Desktop Publishing, Computer-Aided Design, HyperCard, Music, Professional Users, Programmers, Telecommunications, A/UX, Database Developers and more.

You can reach BMUG at any of the following numbers:

849-HELP (Help Line)
549-BMUG (Business Office)
849-9114 (Announcements & Meeting Schedule).

moves is a snap when you've saved a lot.

When software companies start fooling around with their products the result is a new version. Most new versions add new features and capabilities to software. When we plunk our wad of dough down to buy a program, we expect that the company will stay in business and continue to improve the program. Most users stick with a program that keeps evolving, or that keeps sending them letters promising something new.

Please Release Me

Sometimes the new version is to fix bugs not found before the product was released. This is called a maintenance release. Many programs require periodic maintenance versions because of changes in the Macintosh operating system software.

Sometimes it's hard to figure out what version is what. The current System for the Mac is 6.0.2, meaning it is the second maintenance release (also called a subversion) of the 6.0 System software.

The Mac had a solution for this problem—the version resource. This was a place for programmers to put the version numbers of the application. This resource has been around for years, but it was unsupported, or never read, by anyone. Some programmers put some naughty stuff in there, as a reward for intrepid resource explorers. The roof fell in when the System 6.0 software read the version resource—scatological comments and all.

Under System 6.0 the version resource will appear when you **Get Info** about a particular file in the Finder. It is also read by many About...under the Apple menu.

Subverting the Subversion

Recently some developers are trying a more innovative (bad for the user, of course) release strategy. Changes are made in the software going out the door without a corresponding change to the version or subversion numbers. It's possible to have two copies of a software package on the dealer's shelf that look identical, but aren't—one has the changes and the other doesn't.

This practice saves developers lots of bucks. If a bug is in a particular part of a program that most users don't use, they won't supply a fixed copy until you get into trouble and complain! The squeaky wheel release schedule.

The high-end desktop publishing program, *Quark XPress* 2.0, is a recent culprit (*WordPerfect* too) in this subversion strategy. The HelpLine has gotten lots of calls about *Quark XPress* problems with EPS color separations. These problems have been fixed in subversions seven and higher, but how can the user tell their program's subversion? They don't show up in the Get Info window, or in the About *QuarkXPress* under the Apple menu. The answer is to hold down the **Option** key while selecting the **About** *QuarkXPress.*

Everything Else

BMUG has one of the most up-to-date, comprehensive software libraries around with 300+ double-sided disks filled with the latest versions of public domain or shareware programs and *HyperCard* stacks. New disks are unveiled almost every week at the Thursday general meeting.

Our BBS offers the latest versions of files in our software library as well as news, private mail, rumors, etc. The BMUG BBS is part of the worldwide EchoMac Network on FIDOnet; by calling a local FIDOnet BBS in your area, you would then be able to get in touch with us wherever you are as well as send mail to users everywhere! BMUG is now a part of the international USENET network. With our multi-line capability you are now be able to have access to BMUG almost 24 hours a day. It's easy to use, fun and a great resource.

To get some further information about BMUG please write to: BMUG, 1442A Walnut Street #62, Berkeley, CA 94709. If you prefer to phone our business office call (415) 549-BMUG.

Upcoming Events

December 22:	**No meeting!**
December 29:	Call for Information.
January 5:	BrightStar Technology *HyperAnimator*, Epic modems.
January 12:	IDD *Dreams* (CAD stuff).
January 19:	Pre-Macworld Expo demos (in other words, whoever's brave enough to show up).
January 26:	Interleaf *Publisher* (DeskTop Publishing stuff), MicroSeeds *Redux*. ■

As Told To MicroTimes

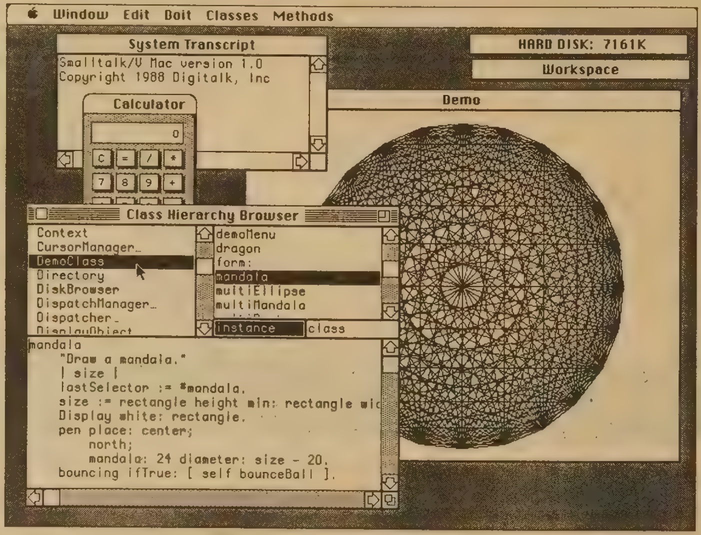
We have a saying around here: 'Goals only limit you.' What Sun really wants to be is respected, successful, highly ethical, a fun place to work. I think a by-product of that is growth, profits, and all the rest of it."

-Scott Mc Nealy,
President, Chairman and CEO, Sun Microsystems.
MicroTimes, Mid-December, 1988

Each month *MicroTimes* brings you in-depth interviews with the people who build and influence the microcomputer industry. We go beyond hype and press releases, offering a variety of opinions and perspectives, revealing the personalities and issues that shape the way personal computer users live and work.

AEC CAD Designers Receive New SoftWare Offering From IDD

Innovative Data Design, Inc., maker of the popular *MacDraft* program, has recently introduced *Dreams*, which it claims takes a new, more intuitive approach to CAD. The application incorporates *MacDraft's* popular object-oriented shape tools, arranged on easy-to-understand "floating palettes" and pop-outs for quick accessibility. *Dreams* comes with a large drawing size capability of up to 8'X8', real-world scaling, new geometric tools, enhanced object manipulation capabilities, layers limited only by memory, associated dimensioning, advanced editing functions, symbol libraries, PostScript and other features. It allows users to create new colors, edit existing shades and import colors from different documents—up to 256 per drawing. *Dreams* permits the tailoring of drawing environments for different disciplines with the addition of specialized modules. Registered *MacDraft* users may purchase *Dreams* for $200, otherwise it costs $500. Innovative Data Design, Inc., 2280 Bates Ave., Suite A, Concord, CA 94520. (415) 680-6818.



```
Smalltalk/V Mac version 1.0
Copyright 1988 Digitalk, Inc
```

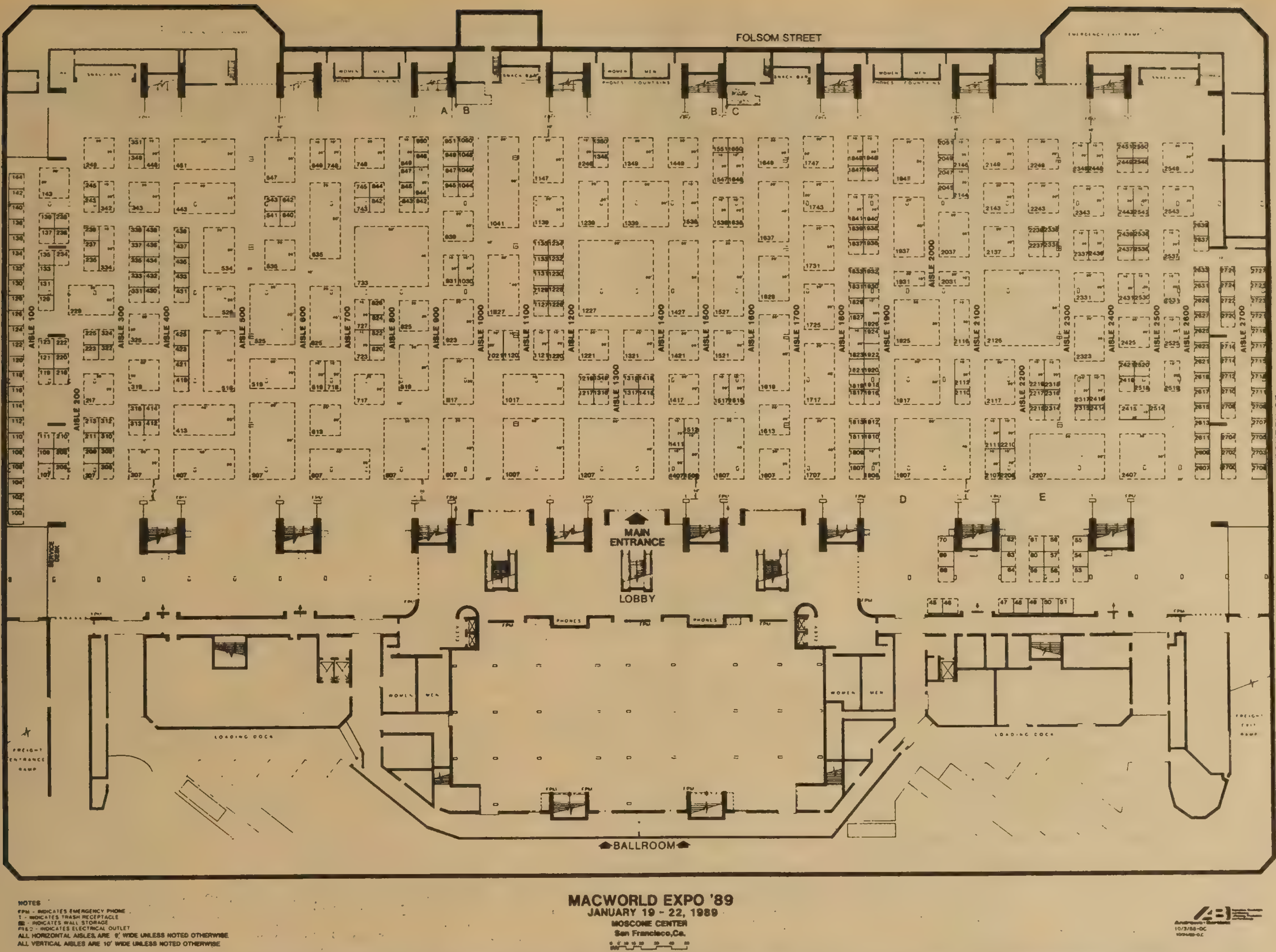
```
mandala
    "Draw a mandala."
    | size |
    lastSelector := #mandala.
    size := rectangle height min: rectangle wi
    Display white: rectangle.
    pen place: center;
        north;
        mandala: 24 diameter: size - 20.
    bouncing ifTrue: [ self bounceBall ].
```

New Smalltalk/V MAC Is Fully Integrated With The Mac Environment And Maintains Compatibility With Smalltalk/V 286

Smalltalk/V, a popular object-oriented programming product widely used in the making of expert systems software, is available for the Macintosh. Programmers can now have the full-blown capabilities of Smalltalk on any Mac from the Plus up. Smalltalk/V MAC is fully integrated with the Macintosh environment and contains all the features of Smalltalk/V 286. The new Mac version of Smalltalk/V includes multi-tasking and provides portability from the 8088/80286/80386 PC family to Macintosh products. It supports very large data structures allowing developers to build systems limited only by the memory on the computer. A book with twelve chapters of tutorials is included with Smalltalk/V MAC, as well as an on-disk tutorial with step-by-step examples. Bit and form editors and a Prolog compiler written in Smalltalk are also provided ($199.95.) digitalk, inc., 9841 Airport Blvd., Los Angeles, CA 90045. (213) 379-6104.

"Invisible PC" Software Now Available For The Macintosh SE, II

SoftPC is an application that allows Macs to run MS-DOS applications without modification and with PC/XT performance. To the Finder, *SoftPC* looks like an application program, but to MS-DOS it looks like an 8086-based IBM PC. *SoftPC* precisely emulates an IBM PC/XT including its processor, peripherals and operating system. This all-software emulator lets users move files between DOS formats and Mac formats in a seamless manner. For example, *SoftPC's* file sharing architecture lets users copy from a DOS application in one window and paste into a Mac application in another. And in network environments, *SoftPC* allows Macs to communicate with IBM PCs and clones as if they were one of them. The application creates a window within the display which looks like an IBM monitor, complete with on/off switch. *SoftPC* must be run on a Mac II, or on an SE with a 68020 or 68030 enhancement card. Two megabytes of RAM are required. ($595.) Insignia Solution Inc., 787 Lucerne Drive, Sunnyvale, CA 94086. (408) 446-2236.



MacWorld Exposition Returns To San Francisco

Fifth Annual Event Promises To Be Biggest Mac Attack Yet

The fifth annual MacWorld Exposition/San Francisco, January 19–22, will be the largest one yet, with exhibitor booths filling not only the Moscone Center, but Brooks Hall as well. The Macintosh enthusiast will find over 400 companies displaying their wares during the three-day event. New products will be announced by many vendors, including Apple Computers, and opportunities will exist for purchasing hardware and software at special prices.

But exhibits and new products are only part of the story. Each day of the Expo will begin with an address by an Apple luminary like John Sculley and Jean-Louis Gassee. Optional conferences and seminars will offer instruction and advice on *HyperCard*, desktop publishing, desktop presentations, word processing, Macintosh programming, databases, and every other conceivable topic related to the Macintosh. Conferences will take place in both the Moscone Center and Civic Auditorium.

Admission to the exhibits alone is $20 for the three days. For both the exhibits and the conference sessions, admission is $75 at the door. For further information, call Mitch Hall Associates, (617)326-9955. MacWorld Expo is sponsored by *Macworld* magazine.

COMPANY	BOOTH#
2Ai	5004
3Com Corp.	525
3G Graphics	61
3M-Audio Visual Division	5005
800 Software, Inc.	108
Aatrix Software	5122
AB Vista	5439
Aba Software, Inc.	47
Abacus Concepts, Inc.	2448
Abacus, Inc.	5136
Access Technology, Inc.	1349
Acius, Inc.	1027
Activision, Inc.	1918
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Adobe Systems, Inc.	607
Advanced Gravis Computer Technology Ltd.	2542
Advanced Matrix Technology (A.M.T.)	5401
Advanced Rotorcraft Technology Inç.	5442
AEC	2049
AESP, Inc.	100
Aldus Corp.	1907
Alisa Systems, Inc.	5816
Allan Bonadio Associates	5509
ALSoft, Inc.	717
Altsys Corp.	1234
Americal Group	2449
American Airlines	5724
American Power Conversion Corp.	5615
AnaMatrix	5913
Answer Software Corporation	5916
Antic Publishing, Inc.	5603
AOX, Inc.	208
APDA (Apple Programmer's & Developer's Assoc.)	519
Apple Computer Australia	2349
Apple Computer, Inc.	1227
Apple Computer, Inc/R & D Group	2709
Applied Data Communications	5001
Archive Corporation	5850
Ars Nova Software	5216
Articulate Systems, Inc.	5424
ASHTON-TATE	407
Assoc. of Apple 32 Users	5338
AST Research, Inc.	1521
AT&T	140
Austin Laser Charge	5828
Autodesk, Inc.	5440
Avalon Development Group	243
Avantec, Inc.	1217
Avatar Technologies, Inc.	1147
Avery Commercial Products Division	2701
Barneyscan	5806
BDT Products, Inc.	2537
Bedford Software, Ltd.	119
Bering Industries, Inc.	5917
Berkeley System Design, Inc.	449
Berol USA	5827
Best Data Products	5909
Beyond, Inc.	2451
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Bitstream, Inc.	5706
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BMUG	1906
Boston Computer Society Macintosh User Group	2137
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Cambridge North America	5144
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Carina Software	68
Carlisle Memory Products	849
Casadyware/Greene, Inc.	820
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Eastman Kodak Co.	2143
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Insight Development Corporation	1847
Insignia Solutions	2710
Interex	5336
Interleaf, Inc.	5002

MacWorld Expo Conference Program Schedule

FRIDAY, JANUARY 20

10:00-10:50	A	Opening Session: —John Sculley.
11:00-11:50	A	HyperCard User Session: The HyperCard Users Report
12:00-12:50	A	HyperCard Developer Session: Tips for Startups
1:00-1:50	C	Getting Started on Your Mac
	C	The Software Developer Forum
	C	Making Desktop Presentations Productive, Part 1: Creating the Images
	M	Getting Started in Desktop Publishing
	M	Of Tips and Tricks and Sealing Wax
	M	The MS-DOS/Mac Connection
2:30-3:20	C	Mac-to-Mac Connectivity Update
	C	The Graphics Outlook
	C	The MacApp Report
	M	Hot Mac/VAX Trends
	M	Customizing Your Mac
	M	International Developments
4:00-4:50	C	Trends in Desktop Publishing
	C	Great Graphic Tips
	C	Beginner's Guide to Networking
	M	Friendly Guide to HyperCard
	M	Status Report: Mac Databases
	M	Desktop Publishing Power Tips
5:00-5:50	C	Corporate User Roundtable, Part 1
	M	MUSE, Part 1

SATURDAY, JANUARY 21

10:00-10:50	A	Keynote Presentation: —Jean-Louis Gassee.
11:00-11:50	A	Keynote Panel Discussion
12:00-12:50	A	HyperCard Developer Session: Hot Tips for HyperCard Design
	C	*The MS-DOS/Mac Connection*
	C	*Of Tips and Tricks and Sealing Wax*
	M	*Mac-to-Mac Connectivity Update*
	M	*Beginner's Guide to Networking*
1:00-1:50	C	Getting Started with Databases
	C	Networking on Campus
	C	*Customizing Your Mac*
	M	Mac Animation and Graphics
	M	MPW Update
	M	*Trends in Desktop Publishing*
2:00-2:50	C	*Status Report: Mac Databases*
	M	*Getting Started on Your Mac*
2:30-3:20	C	Getting the Most Out of Databases
	C	What to Expect in CAD
	M	Desktop Presentations: User Tips
	M	The Mac in the Home Office
3:00-3:50	C	*Hot Mac/VAX Trends*
	M	*The Software Developer Forum*
4:00-4:50	C	The Future of HyperCard
	C	The Beginner's Guide to Word Processing
	C	*International Developments*
	M	Applications for Your Classroom
	M	Making Desktop Presentations Productive, Part 2: Producing the Output
	M	*The Graphics Outlook*
5:00-5:50	C	MUSE, Part 2
	C	*Getting Started in Desktop Publishing*
	M	Corporate User Roundtable, Part 2
	M	Atkinson on HyperCard and HyperScan
	M	*Making Desktop Presentations Productive, Part 1*

SUNDAY, JANUARY 22

10:00-10:50	A	Keynote Session: —Regis McKenna.
11:00-11:50	A	HyperCard User Session: HyperCard Tricks for Users
12:00-12:50	A	HyperCard Developer Session: Advanced Techniques in Scripting
	C	*Desktop Publishing Power Tips*
	C	*MPW Update*
	M	*Beginner's Guide to Word Processing*
	M	*Great Graphic Tips*
1:00-1:50	C	Music on the Mac
	C	*Desktop Presentation User Tips*
	C	*Networking on Campus*
	M	Emerging Technology Update
	M	*Getting Started with Databases*
	M	*What to Expect in CAD*
2:00-2:50	C	*Friendly Guide to HyperCard*
	M	*Applications for Your Classroom*
2:30-3:20	C	The Mac in the Law Office
	C	Getting Started in Programming
	M	What's New and Exciting in Mac Hardware
	M	The Mac in HealthCare
3:00-3:50	C	*The Mac in the Home Office*
	M	*The MacApp Report*
4:00-4:50	C	Meet the Programmers!
	C	What's on the Education Horizon?
	C	*Making Desktop Presentations Productive, Part 2: Producing the Output*
	M	What's NeXT?
	M	HyperCard Surprises
	M	*Getting the Most Out of Databases*
5:00-5:50	C	50 Fabulous Business User Tips (in 50 Minutes!)
	C	*Animation and Graphics*
	C	*Atkinson on HyperCard and HyperScan*
	M	MUSE, Part 3
	M	*The Future of HyperCard*

A = Civic Arena; C = Civic Auditorium; M = Moscone Center

Titles in Italics indicate repeat sessions being shown on videotape.

International Datawares, Inc.	349
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Lynn Products, Inc.	5221
MacGuide Magazine	2623
Macintosh News	5618
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MacTutor	1226
MacUser Magazine/ Ziff-Davis Pub. Co.	825
MacWEEK	2037
Macworld Magazine	1207
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MH Group	5235
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Micro Dynamics, Ltd.	2148
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MicroConcepts	2437
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Micron Technology	249
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Microtek Lab., Inc.	343
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MicroTouch Systems, Inc.	2519
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Mindscape, Inc.	1607
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Mirror Technologies	1228
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Public Domain Exchange	1946
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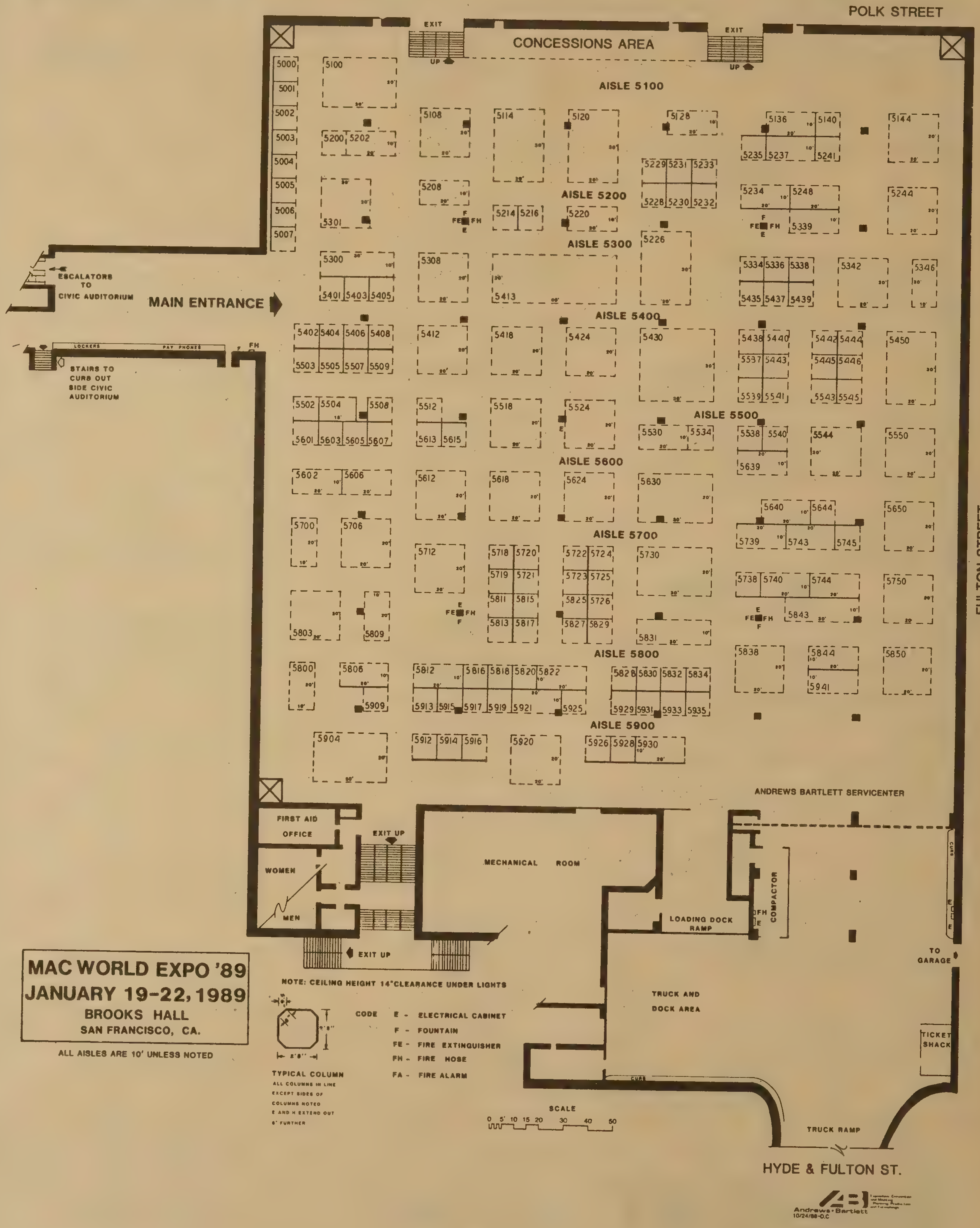

MAC WORLD EXPO '89
JANUARY 19-22, 1989

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NOTE: CEILING HEIGHT 14' CLEARANCE UNDER LIGHTS

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ALL COLUMNS IN LINE EXCEPT SIDES OF COLUMNS NOTED E AND H EXTEND OUT 6" FURTHER

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FH - FIRE HOSE
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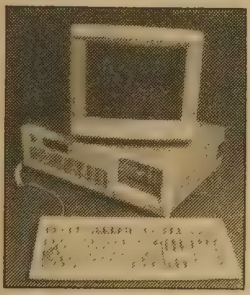

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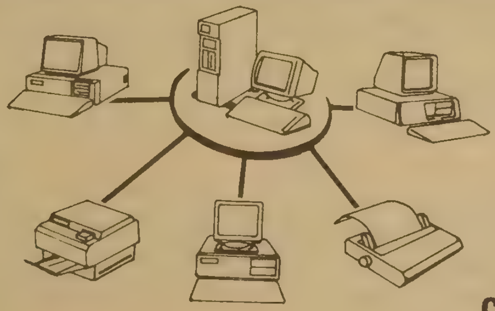

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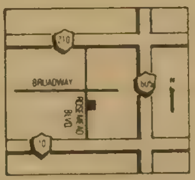

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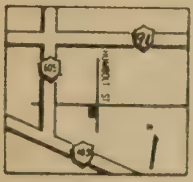

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The Toshiba T5100—386 Power To Go

By Jeff Spurrier

Toshibas 386-based T5100 offers performance and portability as well as an EGA display—for a hefty $7199.

Throughout my computing life I've looked upon laptop computers as playful and somewhat sporty additions to my drab desktop world. Thanks to the sexy little pop-tops, I was no longer chained to my chair. I could write anywhere—on trains, in the park, at the beach. And then, once I'd had my fling, I could come home to my trusty overweight desktop to rework whatever I'd accomplished out in the exciting world of portable computing. The laptops were fun, but nothing I'd want to spend the majority of my writing career with. They were, after all, only laptops.

But with the arrival of the Toshiba 5100, things aren't that simple anymore. Weighing in at 15 pounds, the upper limit of what I consider acceptable for portability, the T5100 has raised the ante for its rivals in the increasingly crowded high-end field with a standard package that includes a 16 MHz 386 processor, a 40Mb hard drive, a 1.4 meg high density 3.5" floppy, two megs of RAM and an EGA 640 X 400 pixel gas plasma display. All this in a 12.2" wide by 14.2" deep by 3.5" high machine.

Getting Started

My machine arrived with the hard drive formatted, so it was simply a matter of seconds before I was up and running, downloading the entire contents of my Everex AT into the Toshiba with *Flying Dutchman*. Using the Test 3 program on the Toshiba DOS 3.3 utilities disk, I could easily fiddle with the machine's setup configuration, altering the screen display, the division of memory into expanded memory, enhanced memory or fast ROM.

The 40Mb hard drive was whisper quiet, as was the 1.44Mb diskette drive. The hard disk has 29 ms access, according to Toshiba; using Coretest I came up with the following numbers: Data Transfer Rate: 239 Kb/sec; Average Seek Time: 38.6 ms (804 cyls); Track-Track seek: 6.1 ms; Performance Index: 2.846. It was far faster than any other laptop I've seen, although the Compaq 386 now boasts a 20 MHz processor.

I had no problems getting anything to run, from *Carousel* to *Tornado Notes* to *WordPerfect 5* to *Procomm* to *Vopt*. The version of *Windows 386* specifically designed for the Toshiba booted up perfectly.

The 82-key keyboard of the 5100 is slightly soft to the touch and somewhat cramped, especially for my rapid-fire three-finger approach, but the layout is great. It's easy to use the Fn key to duplicate any key code possible on a larger 101-key keyboard. The fact that the numeric pad was embedded was not at all a hindrance for me. Overall, I liked it a lot and felt comfortable with it immediately.

About That Screen...

It took a bit longer to get used to the gas plasma EGA display, however. Sure it was bright, amazingly fast (far speedier than any other display I've seen on a laptop) and crisp as a razor's edge. But I found myself irritated by the orange- brown background; I wished that it were darker or a different color. The brightness of the screen and the inability to adequately duplicate colors—merely three shades of orange/red—meant that when I loaded certain programs—*XTREE Pro*, for example—the screen was a mess of brilliant uncontrasted glare. That problem was easily dispelled; I loaded a Toshiba supplied display utility called XCHAD into memory and then, whenever I was confronted with a display contrast irregularity, I'd merely have to hit two keys to improve things dramatically. Annoying but functional—usually. XCHAD did little to improve *WordPerfect Library*'s menu, and it became obvious that certain programs would have to be tailored for the gas plasma screen.

A few final gripes about the screen. It's not removable, which means that when you're hooked up to an outside monitor, you'll have to work with the Toshiba's screen propped open in front of you. And finally, Toshiba should really do something about the spring operated latch on the screen. Whenever I moved the machine around, the screen was constantly popping open at inopportune times.

Design, Support, Etc.

Moving around to the back of the machine you'll see the typical ports: external monitor, serial, parallel. There are some changes back here, however. The parallel port is also used as the port for an optional 5.25" drive so you can't have both hooked up at once. Also there's a slot to the left of the ports where either a modem or an external expansion chassis (capable of holding five boards) can be situated. The port for the optional 101-key keyboard is located on the side.

The 5100's handle slips over these back ports when the machine is in its case and then pops out when its being used as a handle and finally slides down to be used as a height prop. Another clever design addition is the auto voltage sensing power supply, which means you can travel without having to worry about what the voltage set-up is—the machine will adapt itself.

The three-book documentation package that came with the 5100 was everything I've come to expect from Toshiba: thorough, well laid out, intelligently written and accurate. The "First Time" booklet walked me through the machine initially; then I could rely easily on "The Portable Companion" for any follow-up questions.

As with all Toshiba laptop computers, the 5100 comes with a one-year warranty and automatic enrollment in the Exceptional Care Service program. Under this program, if your machine breaks down, Toshiba will send you a new one within one day after they receive yours at the factory. Then you can either keep the loaner or else get your old (repaired) machine back. The Toshiba toll-free support line is generally easy to access, and the Toshiba bulletin board (in Saddle Back Valley) is one of the best around.

When it comes to the human element, Toshiba has most of its rivals beat handily.

The Bottom Line

The bottom line, of course, is finally the price. At $7,499, the 5100 is not the sort of machine you'd leave lying around on the back seat of your car. But with this kind of power under your hood, why would anyone use this computer just for traveling? It's obviously designed to be one's only computer—sleek, sexy and a great cook and homemaker.

And Toshiba obviously thinks this is the direction of the future. They've just announced the 5100's big brother: the 5200. This 18.7 pound behemoth will have internal slots for expansion cards, VGA graphics, a 91-key keyboard, hypertext software, and a choice of hard disks: 40Mb (in the $9,499 version) or 100Mb (in the $10,999 version). ■

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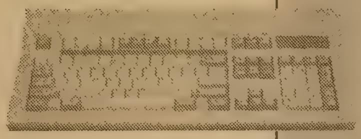

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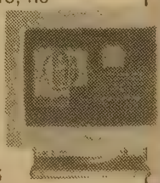

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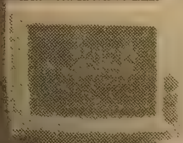

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AMIGA

BY MATTHEW LEEDS

New Amigas—New Products

At COMDEX in November, Commodore announced two new Amigas. The first is the Amiga 2000HD, an Amiga 2000 with the new autoboot hard disk controller and a 40Mb (28 ms) hard disk. The hard disk is formatted and all system software is installed. A re-install floppy is also provided, should the need arise. The 2000HD uses KS/WB 1.3, and the hard disk has the fast file system installed on it. List price is $3,000.

The second Amiga is the Amiga 2500. This essentially is the 2000HD with a Commodore A2620 coprocessor board installed. The A2620 is a 68020/68881 board running at 14.26 MHz with 2Mb of 32 bit RAM (expandable to 4Mb). List price for the package is $4,700.

Current owners of Amiga 2000s should note that there is no real difference between their machines and the new units. A clear upgrade path exists, requiring only the addition of cards and a KS 1.3 ROM chip.

Of far more interest are the technology announcements of not-yet-released products that also occurred at COMDEX. Although many of these products have been discussed in the past, additional details included in the current announcement make for interesting reading. Please keep in mind that none of these technology announcements describe products currently available, and that no pricing information has been released regarding these products.

AMIX™—UNIX™ System V Compatible on the Amiga® 2500 UX

- Fully compatible with AT&T UNIX System V, Release 3.1
- Motorola 68020 CPU with 68881 Math Co-processor and 68851 MMU
- 80Mb Hard Disk and 150Mb Tape Streamer
- 5 Megabytes RAM (Mb full 32-bit memory plus 1Mb 16-bit)
- 1 gigabyte virtual address space with paged memory management
- Includes the AMIX proprietary windowing interface
- Software support for multiple users, multiple screen video, Streams and remote networked file system (RFS)
- AMIX includes a special optimizing C compiler with built-in support for the 68020 and the 68881 math co-processor. Other standard development tools include:

cc **make** **lint**
sdb **yacc** **terminfo**

- Standard utilities and text processing tools include:

email **nroff** **spell** **pic** **sh**
uucp **tbl** **eqn** **vi** **man**

This is a bundled system similar to the A2500, but with a larger hard disk and streaming tape drive. Beta test units have been in the hands of developers for about two months by the time you read this. Adding this to Dale Luck's X-Windows system should make the Amiga a very affordable UNIX workstation.

Amiga®2286 Bridgeboard 80286 Multi-processor Card

- The 2286 Bridgeboard is a complete 80286 PC AT on a single card. It runs your MS-DOS applications in the Amiga's multi-tasking environment.
- 8 MHz 80286 processor with 1Mb RAM and 1.2 Mb 5.25" internal disk drive.
- Drives CGA color and MDA mono PC windows simultaneously with Amiga's graphics.
- One AT and two XT expansion slots, 80287 math co-processor socket, Centronics (tm) parallel port.
- JANUS™ system software provides superior resource sharing for custom multi-processor applications.
- Standard Phoenix ROM BIOS and MS-DOS 3.3 for maximum compatibility.
- Fully auto-configuring with auto-boot capability.

JANUS 2.0—Amiga®'s Multi-processor System Software

- Full-featured support for dual-processor applications programming with the new hardware-independent Services System Software.
- Runs IBM-PC AT and XT software on your Amiga 2000 in a multi-tasking environment.
- Supports both the 80286 and 8088 Amiga Bridgeboard and the Amiga Sidecar.

The two most difficult things about owning an Amiga are being patient while Commodore and third party developers get their new products out the door and then coming up with the money to afford them.

- Drives CGA color and MDA mono PC displays simultaneously with Amiga graphics.
- Superior file sharing and transfer capability including extended character set translation with the Aread and Awrite utilities.
- Jlink resource sharing software allows your Bridgeboard PC to treat Amiga hard disk, RAM or floppy disk files as virtual files.
- DJMount software allows your Amiga to use PC hard disks under the V1.3 AmigaDOS Fast Filing System.
- Microsoft mouse support using the Amiga's mouse.
- Autoboot capability and PC boot from any Amiga file.

These two products will resolve the requests for better MS-DOS capability. An AT Bridgeboard and better Janus software should finally make the Amiga capable of running three operating systems at full tilt on a single hardware platform.

Amiga® Transputer Parallel Processing Workstation

- Transputer implementation for Amiga 2000. Compatible with Amiga's multitasking, blitter and DMA access.
- Inmos™ T414 15 MHz, 32-bit Processor with 2K on-chip RAM cache.
- Up to 17 transputers per Amiga for 170 million instructions per second performance. Up to 20 million floating point operations per second for heavy-duty math and science applications.

Matthew Leeds has been involved in the high tech field since he blew up his bedroom playing with a children's chemistry kit. He has been using Commodore computers since 1982 and has a strong interest in photography, video, graphics and related fields.

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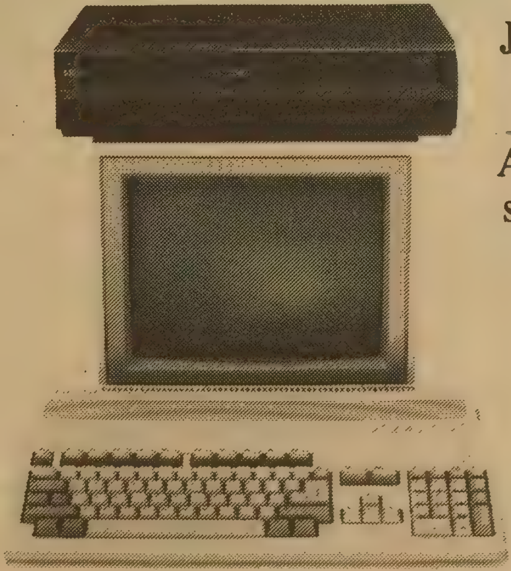

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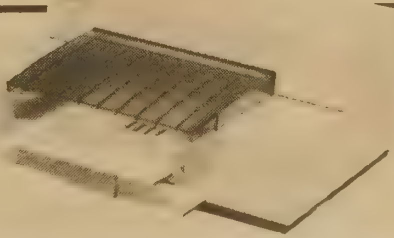

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If three operating systems are not sufficient for you, this makes a fourth. Keep in mind that all of these are running out of a single box sitting on a desk. I'd love to see someone come up with a tower type case that could hold an Amiga 2000 motherboard and expansion peripherals.

Amiga® PVA 2350 Professional Video Adapter

- The Professional Video Adapter is a real-time frame grabber digitizer and genlock system which allows you to capture and digitize a video image from any source.

- The frame-grabber freezes a single video frame in real-time (1/60th of a second resolution). It captures odd, even or both fields in full color. The captured image can be saved, loaded or modified with the Amiga.

- The genlock syncs an external video source with the Amiga's display hardware allowing you to overlay titles and Amiga graphics onto a video tape or other video source. The combined video signal is output in both RGB and composite formats.

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- The Brooktree® BT458 palette chip, provides over 16 million possible colors.

- Direct Memory Access (DMA) capabilities for high speed data transfer and communication between the Amiga and the Graphics Card.

- The industry standard TIGA graphics library provides a library of high speed graphics routines which execute on the TMS34010.

These two should take care of any remaining doubts regarding the Amiga's use in video and graphics. I believe that the two most difficult things about owning an Amiga are being patient while Commodore and third party developers get their new products out the door and coming up with the money to afford them.

Commodore has also started shipping early test versions of the new Extended Chip Set to testers for preliminary shakedown. Still no word on when the new Agnus chip will become available or what support software, if any, will be required to make use of 1Mb of chip RAM correctly. So far it looks like no software will be required other than using SetPatch's -r flag. This will not be the case with the full ECS set as the high resolution modes supported by the new Denise will make use of at least part of AmigaDOS 1.4. Whether the chip set will be released prior to 1.4 and supported, as the Moniterm monitor is, via a RAM/ROM wedge, is still unknown. Stay tuned. ■

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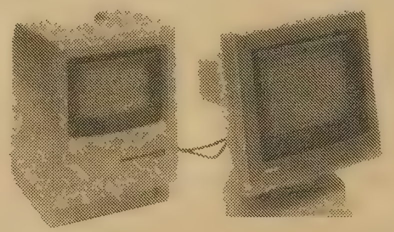

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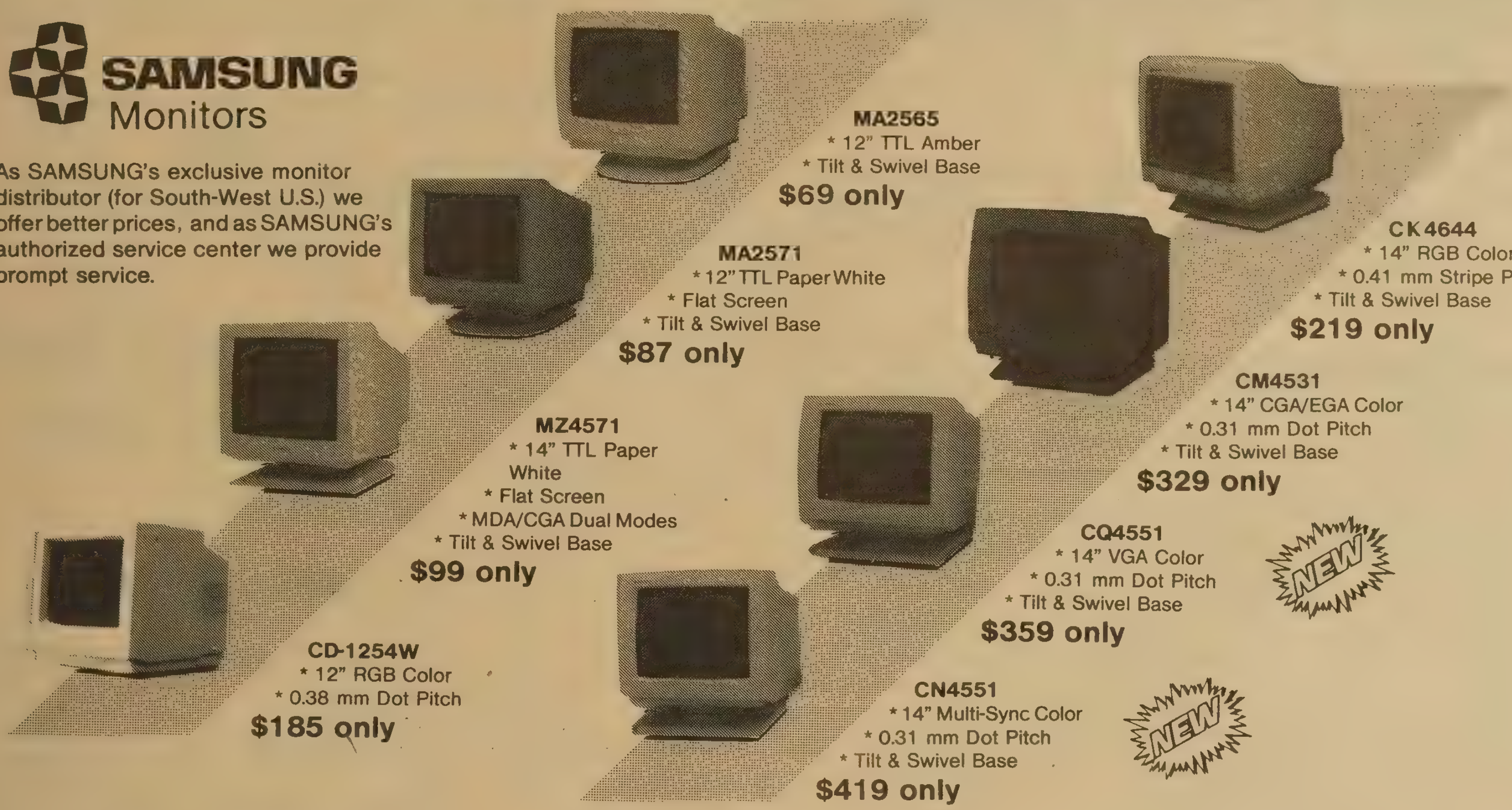

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ATARI ST

BY DAVID HAWKINS

Atari At COMDEX

COMDEX was held in Las Vegas around the middle of November. It's now a little later and I've been able to collect some information from various sources. I wasn't able to go to COMDEX myself this year.

Atari Announcements

Atari announced that they will be shipping a ST portable computer in late first quarter of 1989. Present descriptions of it say that it will be a laptop with 520 or 1040 K of RAM, a 20 meg hard disk (or larger), and a blue LCD screen. Estimated price is to be around $1500. Evidently only a few people got to see the prototype for this computer.

A computer called the Atari TT is to be released in the second quarter of 1989. It's based on the 68030 chip and will run a version of System V UNIX. Developers should be able to get one in the first three months of 1989. A model of this computer was not shown at COMDEX.

Atari did show the following at COMDEX:

The PC4—a 286 PC Compatible with a 30 meg hard disk

The PC5—a 386 PC Compatible with a 30 meg hard disk

The ATW—the transputer workstation

Ultrascript—a PostScript interpreter for the Atari Laser Printer

Deskset II—a DTP program for the Atari Laser Printer

A robotics controlling kit for the ST/Mega computers that allows them to control robot devices through the cartridge port.

What The Other Companies Were Showing

JR Innovations had GenLock on display. There is still no FCC approval. It will go for between $500 and $600.

ISD Marketing was showing *Calamus*, an expensive desktop publishing program. Mainly aimed at the MegaSTs, but there is a version for the 1040 also. A lot of good features. Will sell for $299.00.

Intersect was showing *Masterlink*, an advanced version of *Interlink*. Has *Interlink*'s features, plus a script language and multiple editing buffers. $59.95.

Nite Lite Systems has an RS232 LAN (local area network). $799.00.

Legend Software was showing *The Final Cut*, a toolset for editing and synthesis arrangements. $89.95.

Navarone was showing a new version of *ST Scan* which prints directly to the Atari laser printer.

Precision Software showed *SuperBase Professional* Ver. 3.0. $349.95.

Word Up - *Word Up* was upgraded and looks better. They were also showing the HP Deskjet driver.

FTL now has a hint disk for *Dungeon Master*. It can tell where you are in the game and give the hints for only that area.

Regent Soft showed *Regent Base II* and a kit for the STs that stiffens the key response. The kit is called Megatouch and has a list price of $11.95. You can contact Regent Software at PO Box 14628, Long Beach, CA 90803-1208. Phone number is (213)439-9664. Sounds like a great product and I'm hoping to get one soon.

Developers Conference

There was a meeting of over 300 Atari ST developers and Sam Tramiel on November 16th. Tramiel made the following announcements:

The DRAM shortage is now over at Atari. Production had been hampered by the lack of memory chips.

Between 50 thousand and 75 thousand Mega STs are produced each month. Right now about 90% of those are sent to the European market, where Atari has had a lot of success in selling STs. However, this will be changing.

Come Fly With Me

I spent this week with *Falcon*, a F-16 fighter simulation from Spectrum Holobyte, 2061 Challenger Drive, Alameda, CA 94501, (415)522-3584. My progress so far? I can get it in the air, but haven't been able to bomb anything.

Falcon is a pretty good game with a lot of features and an excellent manual. The manual shows a lot of attention to detail and uses clear examples of what a beginner needs to get into the air. The manual is the key to learning to play with *Falcon*. The simulation is so complex that you can't just sit down and take off—unless you're an experienced pilot of the real thing.

Anyway, *Falcon* has good graphics and a good interface. If I get to the point of being able to bomb things, I might stick with this game for a while.

According to Atari president Sam Tramiel, the DRAM shortage is now over at Atari. Production had been hampered by the lack of memory chips.

I do have one gripe: the game comes with a decoder ring, but the instructions don't mention it. However, you do need to use the decoder ring to get the game going. It took me a while to figure that out.

Increasing Complexity

Falcon is just one more program for the ST where reading the manual is an absolute necessity. I miss sitting down and popping in a disk and immediately starting to play a game. But I guess all the simple games have been done.

I like the interface for games like *Dungeon Master*, but even it takes a little reading. I coached someone through the opening of *Dungeon Master* and it reminded me of how much had to be explained before one could enjoy just playing the game. ☐

Copyright © 1988 by David Hawkins. All rights reserved. David Hawkins is the host of the Atari conference on The WELL (415/332-6106); send email to dhawk. He has one of the first Atari ST 1040s sold in San Francisco goth monitors, an Okimate 20 color printer, and disks all over the room.

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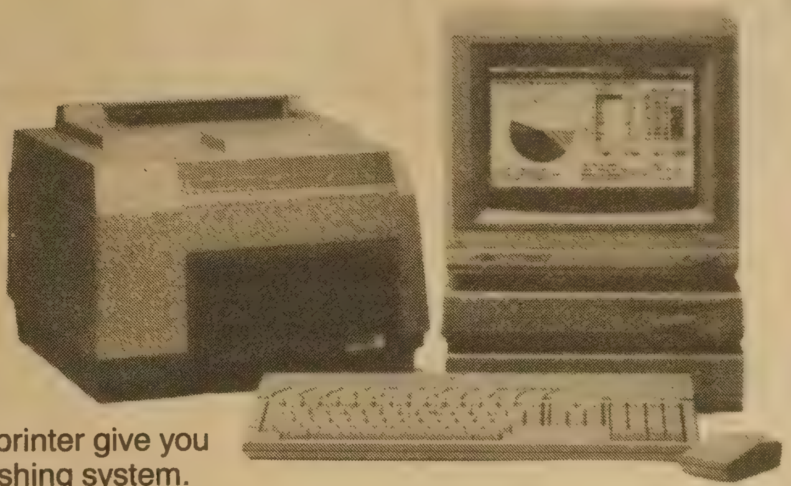

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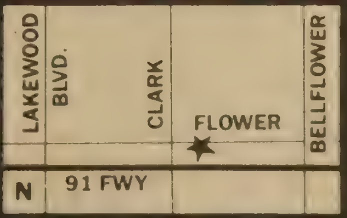

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BUSINESS COMPUTING

BY SUZANNA MUSICK

Does Your Business Need Automation?

As a business owner, you can only keep so much information in your head. As a business grows, tasks, responsibility and authority must be delegated to others. Accurate, timely information is needed by everyone involved in making decisions that affect the business.

In this column we are going to examine the most likely motivations in the decision to automate. You will observe that some of these overlap. Something that affects a business in one area almost always has a ripple effect.

1. Growth: Growth is the number one reason why a business should automate. As a business grows, it takes more time and effort to prepare reports, and management can quickly lose track of key performance indicators. Financial statements are only seen quarterly or once a year. There is not enough time to spot quick moving trends and potential problems.

Retailers often suffer from this problem. Typically they have a large volume of small transactions. As a result, it is all they can do to keep the shelves stocked and ring up sales. They must order inventory well in advance and must sell it shortly after it arrives in order to make a profit and stay in business. Cash flow is critical.

Computers can help in many ways. An inventory control system helps to spot fast- and slow-moving items; a purchasing system provides information on vendor performance and cash requirements; a point-of-sale register and bar-code reader can process sales faster and more accurately.

2. Avoiding redundancy: Another good case for automation lies in the redundancy of manual systems. Information is written down in one place and then transferred to another and another, until—if you are lucky—it finally finds its way into a management report or financial statement.

3. Need for timely information: Many of our clients' first requirement is to prepare an aged accounts receivable report. If their accounting system is manual, invoices are written, then recorded in the sales journal. Cash sales and checks are added to the daily deposit, the items sold are recorded on inventory cards, a customer ledger is updated, and then—if everything goes according to plan—all of this data is filed accurately. By the time an aging report is compiled and typed, the report itself is aged! The information is no longer accurate—checks have been received since the report was prepared and invoices have fallen due. A computerized accounting system allows you to generate an aged accounts receivable that is as current as the last transaction you entered.

4. Need for more information: Many managers wish to track certain kinds of business information but don't because the effort would be too time-consuming or costly. When it is a challenge to get invoices out on time, sales analysis is inconceivable. Business cards of prospective clients are never converted into a mailing list. And there is never enough time to analyze the performance of sales staff in order to reward superior accomplishments and make needed improvements.

5. Inventory control: It seems logical that if a business is selling a great deal of inventory they will certainly make money, but this is often not the case. If products are not priced correctly, if overhead and personnel costs are too high, your bottom line will be affected. If the business is carrying too much inventory, or losing sales by being "out of stock," your profits again will be affected. Automation can help.

An inventory program will tell you what your profit margin is for a particular item or a group of items. It will tell you how many you have in stock and warn you when you get below your reorder level. It will track customer back orders and give you receiving information. You can keep track of where you inventory is being stored, whether it is in multiple warehouses or bins. These are just a few of the inventory reports available for an automated system.

6. Need to obtain bank financing: Any bank or investor will require up-to-date and reliable financial statements before extending credit. And they do not just want to see them at the time of application, they want to see them every month. By keeping your books on a computer, you can have financial statements, as well as the other reports we have been discussing, available upon demand.

While many businesses automate to please their lenders, they usually reap many other benefits. Almost immediately, the other management information now available to them enables them to run their business more profitably.

7. Need for quick turnaround: There are numerous benefits in being able to communicate with other company offices, or with vendors and credit institutions. One of our law firm clients does its banking over a computer. With a single call, the firm's accountant can check balances, make transfers and invest excess monies, thereby making maximum use of their cash. Wholesale clients use their computers to place orders directly with their suppliers. This can cut days off order processing time.

If a business has multiple locations and does not have an interoffice network, accounting information must be gathered from each site and transferred to the home office for consolidation, a time-consuming process which delays the preparation of management reports. Computers at each location could allow for the electronic transfer of accounting information to the "home office" computer, thereby saving considerable time and effort.

Today's computer technology offers automated solutions for virtually every type and size of business. Because of the low cost of microcomputers, even small business owners can computerize their business.

8. Need to comply with contract stipulations: Finally, automation can be a stipulation in a contract. For example, some construction jobs require architects and engineers to use CAD/CAM (Computer Aided Design/Computer Aided Manufacturing) systems. Again, when businesses automate to meet the requirements of others, they most often find a hidden treasure of information they can use to manage their own operations.

As a manager, you need timely and comprehensive reports to make informed business decisions in both the short and long term. Although an aged accounts receivable report is most often requested, there are many other reports which can provide valuable information to the decision-maker. For example, how would you like to be able to answer the following questions about your business?

- How much money are you losing by not taking advantage of discounts?
- What 20% of your clients make up 80% of your business?
- Are jobs being completed profitably and on

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Suzanna Musick is a Manager in the Computer Consulting Department of Hemming Morse Inc., CPAs. Her experience encompasses a wide range of industries such as distribution, retail, construction, real estate, financial and professional services.

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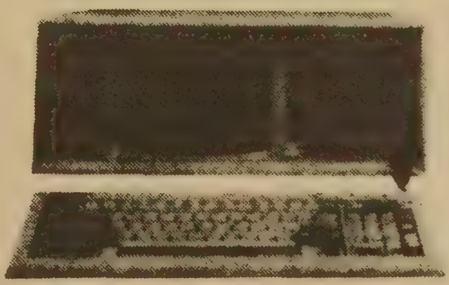

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time?

- What percentage of your receivables is over 60 days old?
- What is the value of your inventory right now?

Instant answers to these questions, and more, lie behind the doors of automation.

To wrap things up, I thought it would be useful to look at some of the benefits specific types of businesses can gain from automation. These benefits apply to each individual business or profession and are only the tip of the iceberg. All of the other benefits discussed above apply as well and should not be overlooked.

Attorneys and CPAs: For businesses which bill by the hour, tracking labor and operating expenses is an arduous and time-consuming task. Without an automated Time and Billing program, bookkeeping staff must spend hours transferring information from individual time sheets to client cards. Invoicing is necessarily delayed. With a computerized Time & Billing system, reports can be generated which show how productively the staff is performing and which areas of the practice are more profitable.

Contractors: A contractor uses job costing to tell if jobs are being completed within budget. Information from accounts payable, inventory and payroll is tracked to each job. A good job costing program can help a contractor spot cost overruns before they get out of control. Further, because construction workers are often union employees, an automated payroll program can make it easier to provide the reports required by union and other Federal agencies.

Financial institutions: These businesses must deal with strict regulatory reporting requirements. They also process large volumes of transactions and must be able to provide accurate and timely information to depositors. Computers help manage the volume as well as the variety of information for these types of businesses.

Manufacturing: Inventory control is as critical to the manufacturer as it is to the retailer. There must be enough inventory on hand to produce the finished goods needed to fill orders, but not so much that it sits on the shelf a long time. A manufacturer needs to keep track of the parts required to build an item (bill of materials) and project how much inventory is going to be needed to fulfill the orders (materials requirements planning). You guessed it! A computer will assist with these tasks, and more.

Medical: The most important thing a doctor does is take care of patients—making patient history a critical maintenance item. And most patients have insurance policies to help offset their medical costs. Doctors, and the people who work with doctors, do not enjoy dealing with all of the insurance filing requirements. Many of the new HMO and PPO plans have even more specific requirements for filing claims. Once the payments from the insurer are received, tracking them to the correct claim can be time consuming.

There are many programs available that do an excellent job of maintaining patient history as well as processing insurance claims. Some even have calendaring and scheduling to manage the office hours.

Real estate brokers and developers: If the business is in real estate development, a good job costing system is essential to managing development and tracking profits. Real estate brokers can use automation to track buyers and sellers and put them together. Real estate firms specializing in property management can use software to track properties and leases. Property management software will compute and allocate common area maintenance fees, track expiration dates of leases, escalation and repair fees to specific units or buildings.

Retail: Inventory control is the number one consideration for the retailer. Other areas of automation which work with inventory and offer more control and information include purchasing, order entry and point-of-sale cash registers. Reports from these various systems provide the retailer with sales analysis, inventory turnover, product profitability and a myriad of other reports.

Wholesale Distribution: As is the case in retail and manufacturing operations, inventory control is a pivotal application. Wholesale distributors also need order entry to check stock, provide quotes, generate picking tickets and produce invoices. Like manufacturers, wholesale distributors often "subassemble" various parts to create new products or kits.

Today's computer technology offers automated solutions for virtually every type and size of business. Because of the low cost of microcomputers, even small business owners can computerize their business. For medium and large companies a network of microcomputers can provide an excellent solution.

If you or your company are being burdened by processing paperwork, or are not getting enough management information, you should seriously consider making your next "hire" a computer. Next month we will discuss how to go about selecting business software. ■

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CARD GAMES (109) Canasta, hearts, draw poker & bridge.
STRIKER (110) Defender-like game. "Top Gun" in space.
FLIGHTMARE (112) Futuristic fighter pilot game. (Requires color graphics adapter.)
SLEUTH (117) Who done it?
DND (119) Like Dungeon and Dragons.
ROUND 42 (120) Better than Space Invaders. 42 levels.
GAMES IN BASIC (124) Lander, biorhythms, desert, Phoenix, Star Wars, others.
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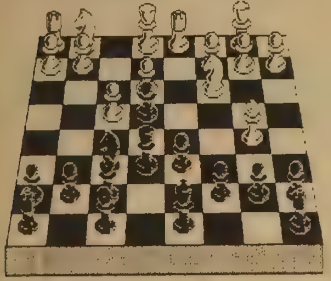

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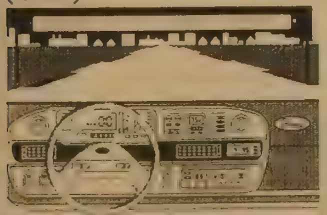


MUSIC

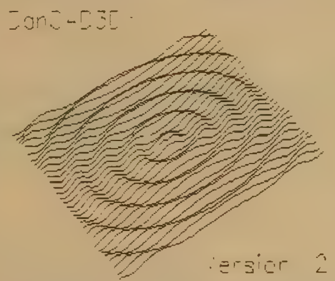
PIANOMAN 3.2 (301) Turn your keyboard into a piano.
PC-MUSICIAN (302) Compose, save, and play music.
CHRISTMAS SONGS (311) Play your favorites on a PC.

WORD PROCESSING

PC-WRITE 2.71 (401-402) (2 disks) Latest version of this popular program w/spelling checker.
PC-TYPE+ (421-423) (3 disks) Excellent. Includes mail merge, 100,000 word spelling checker. Interfaces with PC-File+, PC-Style.
MAXI-MAX (432) 59 macros to use with Word Perfect 4.2 or later. 11 templates for forms, border designs, etc.

GRAPHICS

KEYDRAW CAD SYSTEM (1001, 1002, 1065) (3 disks) Popular. Also uses mouse. (Requires color graphics - CGA.)
DANCAD 3-D (1051, 1052) (2 disks) Create 3-D graphics. Rotate, magnify, etc. Runs on CGA, EGA, or Hercules.



SIDEWAYS (1007) Prints text sideways. Useful for spreadsheets.
SIMCGA/HGCIBM (1027, 1062) (2 disks) Use with Hercules graphics card/ compatibles to run programs requiring CGA on your monochrome PC.
IMAGE 3-D (1048) Create and edit 3-D objects. Move, scale, rotate and tip image.
FINGERPAINT (1050) Use keyboard or mouse to draw. Like MacPaint. (Requires CGA or EGA.)
FANTASY (1057) Create flowing graphic images with mouse or keyboard. (CGA).
FLOWCHARTING (1078-1079) Complete system for flowcharts, organizational, electrical, etc., with symbols.

RELIGION

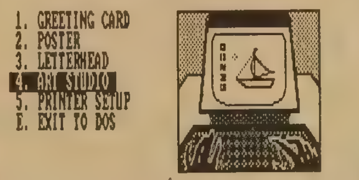
THE BIBLE (3301-3306) (6 disks) Old Testament, King James version.
THE BIBLE (3307-3308) (2 disks) New Testament, King James version.
WORD WORKER (3309-3310) (2 disks) Bible search program. New Testament, King James version.
BIBLEMEN (3330) Excellent Bible quiz program.

BASIC

PC-PROFESSOR (1401) BASIC tutorial. Good.
BASIC PROGRAM GENERATOR (1402) The menu driven way to write programs.
B-WINDOW (1407) Give windowing capabilities to your Basic program.

UTILITIES

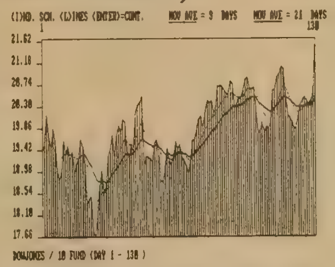
HOMEBASE (2608, 2612, 2613) Complete desktop organizer. Great!
LIGHTNING PRESS (2718) Printshop clone. Includes graphics for many uses.



PROFESSIONAL MASTERKEY (2805) Like Norton's. Retrieve deleted files. A lifesaver.
BAKER'S DOZEN (2821) 13 utilities from Buttonware.
AUTOMENU (3003) Make PC menu driven. Incl. passwords.
SCREEN (3006) Save your monitor from screen burn-in.
DOT MATRIX FONTS (3061-3062) (2 disks) Print your text in different fonts. Works with most printers.

ACCOUNTING/FINANCE

MARKET CGA (BUS17) Performs sophisticated analysis on stocks, funds, etc. (EGA version is BUS16).



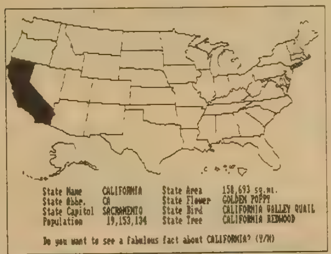
BILLPOWER+ (BUS40) Bill clients for time and materials, advances, retainers, etc. Computes taxes, past due interest, etc. Has full G/L.
CPA LEDGER (706-708) (3 disks) Complete general ledger for corporations, partnerships or sole proprietors.
PERSONAL FINANCE MANAGER (715) Household budget manager. Keep track of checking, savings, investments.
PAYROLL USA (725-726) Up to 2,000 employees in any state. dBaseIII and Lotus compatible. Complete P/R system.
EXPRESS CHECK (786) Check acount with running balance, monthly reports, etc. Prints checks.
FINANCE MANAGER II (774-775) (2 disks) For personal or small business financial management.

SPREADSHEETS

AS-EASY-AS (505) Great. Includes screen help menus. Utilizes function keys. A Lotus clone that reads Lotus files.
PC-CALC+ (512-514) (3 disks) Jim Button's famous Lotus clone.

EDUCATION

FUNNELS AND BUCKETS (201) A fun way to learn math.
MATHPAK (202) Tutorial with lessons in higher math.
PC-TOUCH (204) Learn typing.
BASIC TUTORIAL (208) Learn programming with BASIC.
BEGINNING SPANISH (211) Tutorial.
SPANISH II (232) Sequel.
BIBLEQ (214) Learn the Bible with this Q-A tutorial.
FACTS 50 (239) Geography lessons for U.S. Nice graphics.



State Name CALIFORNIA
State Abbr. CA
State Capitol SACRAMENTO
Population 19,153,134
State Area 158,693 sq.mi.
State Flower GOLDEN POPPY
State Bird CALIFORNIA VALLEY QUAIL
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LOTTO PROPHET (2364) Best Lotto program we've seen.
CITY DESK (2513) Simple desktop publisher.

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LOTUS MACROS (601) Save hours of work. (Req. Lotus)
LOTUS SPREADSHEET TEMPLATES (602) Ready-made. (Requires Lotus 1-2-3)
GOAL-SEEKER V3.5 (624) Achieve objectives by changing spreadsheet variables and seeing result. (Requires Lotus.)
LOTUS TUTORIAL (630) Learn Lotus (requires Lotus).

DOS

DOS TUTORIAL (1301) Teaches you to use DOS.
STILL RIVER SHELL (1304) Run DOS commands from a menu. Makes DOS easy.
BATCH FILE TUTORIAL (1305) Utilize batch file processing.
MORE DOS TIPS (1318, 1323) (2 disks) More about DOS.
HELP DOS (1326) On line DOS help with menus. Includes DOS dictionary of terms and a hints menu.

TELECOMMUNICATIONS

Q-MODEM 3.1 (1101, 1102, 1144) (3 disks) Powerful but easy to use. Fast.
RBBS V16.1A (1107-1109, 1150) (4 disks) Multi-user BBS.
PROCOM 2.42 (1112-1113) (2 disks) Hacker's delight. Redial capability. Latest version.

SECURITY/HACKING

UNPROTECT PROTECTED PROGRAMS (1202) Make backups of protected software.
UNPROTECT II (1203-1204) (2 disks) Ways to backup commercial software.
UNPROTECT III (1205) Unprotect Softguard protection.
UNPROTECT IV (1206) More programs you can unprotect.

ADULTS ONLY

ADULTS ONLY (2901) Animated. Req. CGA.
MAXINE (2902) Incredible. (CGA)
STRIP POKER (2903) Pick opponent (CGA)
BAD-BAD (2904) Adventure game.
ASTRO-(BLEEP) (2905) Arcade game (CGA)
X-RATED COLOR SHOW (2915) Beautiful girls. (CGA)
X-RATED PRINTSHOP (2909) Graphics for Printshop.

DATABASE PROGRAMS

PC-FILE + 2.0 (801, 805, 837) (3 disks) Rated better than dBase III+ by Consumer Rpts.
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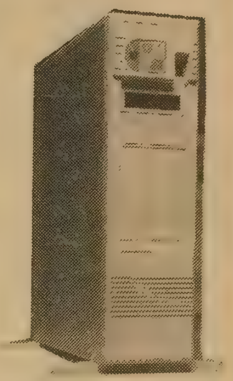

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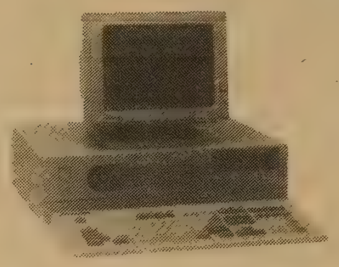

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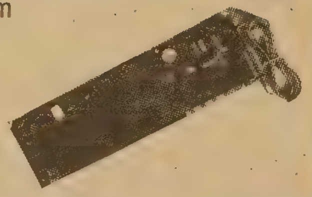

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USER GROUP NETWORK

BY MARY EISENHART

Greetings, Southlanders—hope you all had wonderful holidays and are now ready for another year of fun-filled and/or productive computing.

Among the stack of correspondence we've received, there are some interesting bits of little-known information which may well be of use to the user group community in general. We'll start with the news from the **National Association for the Exchange of Industrial Resources.**

NAEIR, itself a nonprofit group, takes donations of surplus inventory from corporations, then redistributes the materials to member organizations, all tax-exempt, nonprofit 501 (c)(3) organizations. Eight thousand schools and charities across the country already participate. Members pay annual dues of $520, plus shipping and handling on the merchandise they order. The merchandise itself is free; NAEIR says its members average $6,000 worth of new materials a year.

What's in it for you? Well, available products include computer paper, modems, diskettes, cables, software, books and manuals, disk drives, anti-glare screens, workstation furniture, dustcovers, and the like. The program has been in existence since 1977 and expects to give away over $45 million in new merchandise in 1989.

Not all user groups fall into the 501 (c)(3) category, but for those who qualify, this could be a valuable resource. You can get more information by writing NAEIR, Dept. MT-2, 560 McClure Street, Galesburg, IL 61401 or giving them a call at (309)343-0704.

Also of interest is this innovative marketing idea from **Ronald Ted Smith** of Sarasota, FL—**The Classified BBS.** Ron has devised a plan whereby buyers and sellers can find each other in nationally-distributed online classified ads. Says Ron: "If you're selling something and want a national audience, or if you're looking for a rarity that doesn't show up in your local paper, you can let your modem do the looking."

Ron makes a database of listings, which is updated monthly, available free of charge to any BBS that wants to carry them. Advertisers pay $1.50 per word (20 word minimum) for classified ads, and $90-300 for display ads depending on size. Ron cheerfully accepts checks, VISA, MasterCard and American Express, and if you'd like more information, give him a call at (813)758-8094.

BBS operators who'd like to carry the ads can do so by calling The Classified BBS, (813)755-5883 and downloading the appropriate software. Also, if you'd like to read the ads and nobody in your area has them, you can also call up the board.

Closer to home, **Kenneth P. Wilson** of Glendale runs the **Consumer & Business Network BBS** at (818)360-4679. This board also offers a variety of databases, ads, and news services; users can access the board free of charge for 20 minutes per day; for an unspecified charge Kenneth describes as "minimal," you can get full service, i.e., 60 minutes per day.

Moving from the realms of the commercial, we hear from **Larry Blair** of Long Beach, who invites you all to check out the **Amiga User's Group of Long Beach**, of which he is the president. The group has four special interest groups which meet monthly: Tech, Beginners, Main, and Video/Graphics. All meetings are held at the Mid-Cities National Bank on the northeast corner of Lakewood and Artesia in Bellflower. For specifics on meeting times and dates, give Larry a call (between 10 am and 2 pm, please) at (213)422-8226.

Also on the Amiga front, we hear again from the **South Bay Amiga Dudes**, specifically from its president **Mike Lehman**, who hastens to assure us that notwithstanding the name, it happily welcomes female Amiga enthusiasts to its ranks. Mike explains: "The South Bay Amiga Dudes was formed as an 'alternative' user group to the larger user groups in town. We hope to concentrate more on what individual users are doing with their Amigas than on having another spreadsheet demo. At this stage we have been meeting for just over a year, and still are a small group. We welcome anyone interested in the Commodore Amiga line of computers, be they male or female, of any age (one of our teenage members is probably the best C programmer in the group). The name South Bay Amiga Dudes was arrived at because the members wanted: a) an off-beat and unique name that could represent the new direction that the members wanted to take with the user group; b) a name that had some of the spirit of the South Bay area—the location where surfing came to America—'Surf's up, Dude...'

"It is our hope that the name does not give the impression that the group is oriented to just half the population. We have taken our share of ribbing over the name (and gave some in return), but let it be known that anyone interested in the Amiga is welcome at the meetings. We meet at 7 pm on the third Thursday of the month, at Creative Computers, 4453 Redondo Beach Boulevard, in Lawndale." So, Amigos and Amigas, c'mon down...

(You can also call Mike at 213/370-6008 or **Charlie Greene** at 213/540-9860 for more info, or leave a message on the **Private Eyes BBS**, 213/326-9860.)

If you happen to be in Bakersfield on January 12, which happens to be the Second Thursday, stop by the meeting of KIPUG, the **Kern Independent PC User Group**, where the minions of **Peter Norton Computing** will be showing off their product line, including the famous *Commander.* The meeting takes place from 7 to 9 pm at the Kern County Superintendent of Schools Boardroom, 5801 Sundale Avenue.

dBASE-oids in the Westwood area will be happy to hear that the **UCLA PC Users Group** now has a **dBASE SIG**, which welcomes programmers of all skill levels. According to co-leader **Tom Rombouts**, the meetings take place at 7:30 pm on third Wednesdays, and you're invited to call (213)874-7471 for more info.

Aaron Epstein of North Hollywood reminds us about the **Valley Computer Club**, which is Southern California's oldest computer club and specializes in IBM and compatible computers. It meets on first Wednesdays at 7 pm at the Burbank Board of Realtors Building, 2006 W. Magnolia, Burbank. It offers guest speakers, a monthly newsletter, a BBS, a software library, and general user help. Call Aaron at (818)769-1837 with further inquiries if you're interested.

Finally, in what we consider a highly desirable trend, more and more hardware and software vendors are setting up their own BBSes for customer support. **Ashton-Tate**, **Epyx**, and others have been doing this for some time; now **C.Itoh** joins their ranks with the **C. Itoh Technical Support BBS**, (714)660-1698 (24 hours, 1200 baud, 8-N-1). It offers free tech support for C.Itoh printers and terminals, as well as switch settings, printer drivers, and utilities. This information comes to us from **George Petronis**, a Product Support Specialist at C.Itoh in Irvine.

A parting comment—hey, what's the deal? We didn't get one piece of mail from a Mac user group in Southern California all month! And with the Macworld Expo coming up too... Well, we'll be there, and look forward to seeing you all, and hope to get some Mac-oriented mail next month.

As always, please keep sending that US Mail to User Group Network, 5951 Canning Street., Oakland, CA 94609. And send that email to microx on The WELL, (415)332-6106, or {pacbell, hplabs, ucbvax, apple}!well!microx from usenet. Thanks, and see you all next month.

BULLETIN BOARDS

INTERNATIONAL

Cassia Express. (065) 344-9163. 300/1200/2400 24 hrs. Singapore. Sysop: N.M.Rahman

FidoNet Argentina (054). (011) 541-22-419. 8-N-1 3 PM-11 AM PST. The 1st fido node in Argentina has over 450 subscribers. Specializes in issues from S.A. PD software library to d-load. Sysop: Pable Kleinman

Remote Bulletin Board (Singapore). (065) 445-1646. 9600/2400/1200 24 hrs. 218 MB On-line (IBM upload/download). Sysop: Umar A. Rahman

203

Terrapin Station. (203) 656-0134. Grateful Dead Board. Sysop: Klaus and Gretchen Bender.

209

Bertha Board BBS.(209) 239-9853, 300/1200/2400, 8-N-1, 24 hrs. MS-DOS, others. 95 Mb on-line. Emphasis on programming. Uploads and downloads. No fee but registration required. Sysop: Kenneth Roach.

Oasis Software Library.(209), 823-2803, 300/1200/2400, 8-N-1, 24 hrs. Shareware and PD for IBMs and compatibles. No fee but registration required. Sysop: Tim Campi.

Silicon Realms. (209) 754-5530. 300/(1200 Soon) 9:30AM to 6:30AM.Formerly Motherload 64. Commodore, PET & Plus/4. Programmers board, Continuing & Short Story boards, FRPG. Sysop: Joe Commodore

SMERDON'S CASEL (California Attractions, Sights and Entertainment Listing), (209) 521-4910, 8-N-1, 24 hrs., 300/1200/2400. Information on over 700 things to do and see in California. Free. Sysop: Sharon Smerdon.

The Backdoor BBS.(209), 952-9430, 300/1200/2400, 8-N-1, 24 hrs. MS-DOS oriented board. Lots of software, online chess game, much more. Sysop: Randall Fox.

212

Lawyers Linked by Modem. (212) 766-3788. Three hundred registrants. A BBS for law-related material. Sysop: Rees Morrison.

RadNET OnLine Services 24 hrs. Online computer network for Nuclear Medicine professionals. Offered through Compuserve. Regular on-line conferences. Call for information and registration. Voice phone: (212) 856-6449.

213

Ashton-Tate Support. (213) 538-6196. Free technical support, answers to questions about Ashton-Tate software products.

Backroom BBS, (213) 420-7622, 8-N-1, 24 hrs., 300/1200/2400/9600. Very Mac, also Apple II and MS/DOS. Direct access to Applelink, but not by user.

Beaver Creek. (213) 437-1410. 8-N-1 All but 4-9 PM. Sysop: John Campbell

Beta RBBS. (213) 393-9777. 1200/2400. Free entertainment BBS. Audio, video, DJ, music, movies, news and discussions. Sysop: Jason Lin.

Career-Point Information (CPI), (213) 423-4999, 24 hrs., 10 lines on rotary. CD-ROM, INFO-MAT Magazine, USA TODAY, Writer's Board, Online Shopping and CHAT. "Where the professional & BBSing come together!" Over 1400 active users. Sysop: Mark E. Bishop. Voice: (213) 428-0363.

Chat Line. (213) 534-4311.

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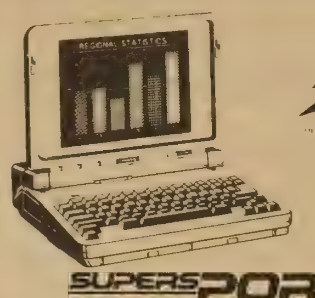

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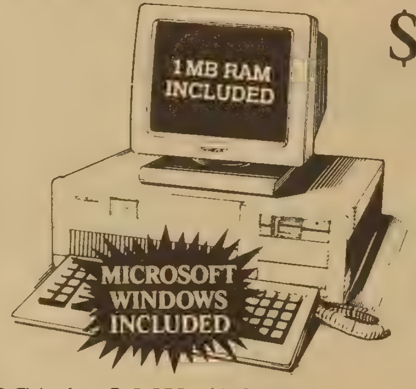

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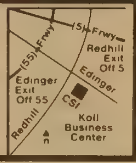

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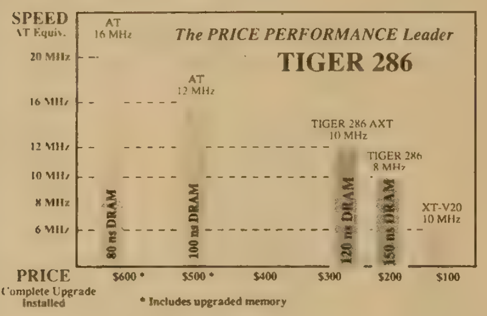

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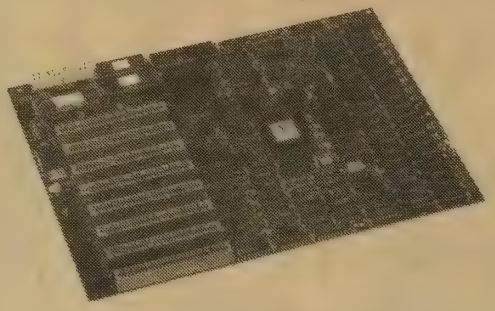

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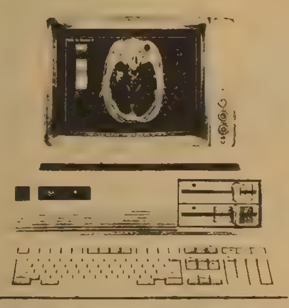

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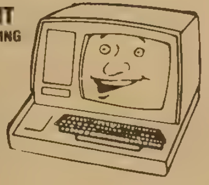

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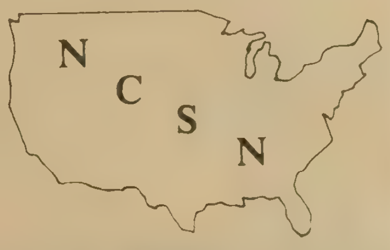

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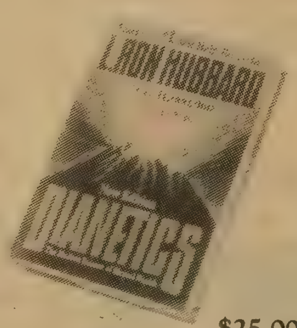

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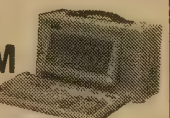

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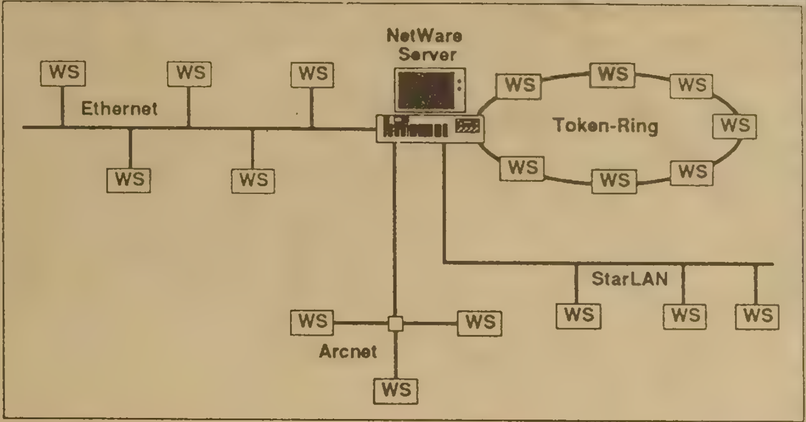

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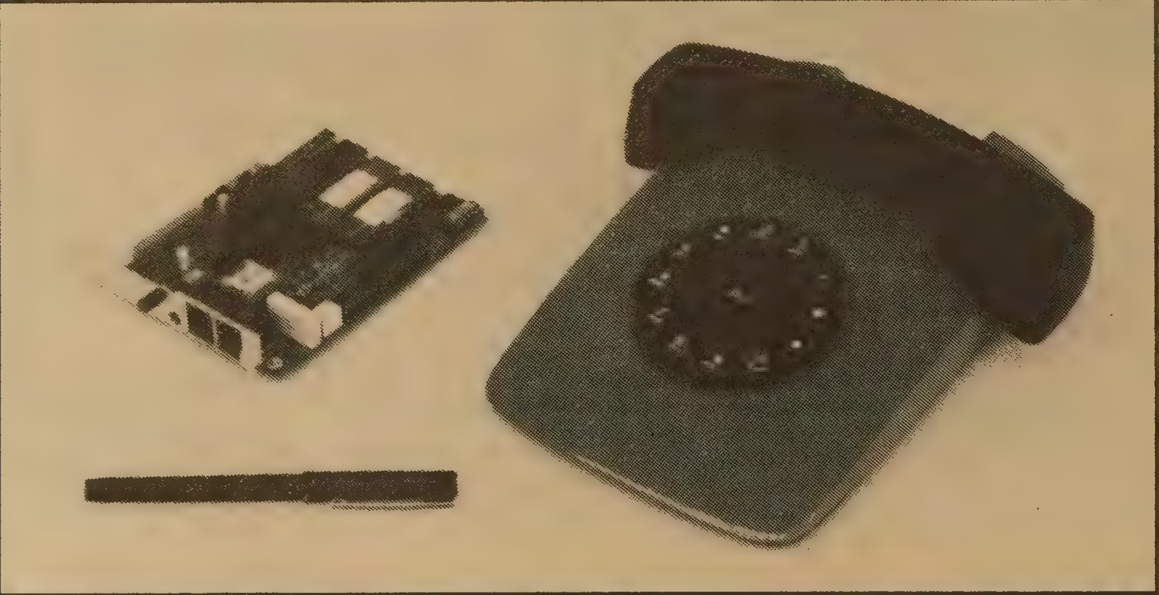

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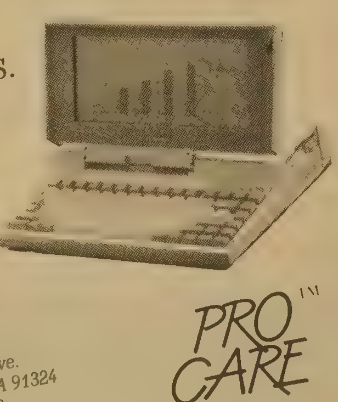

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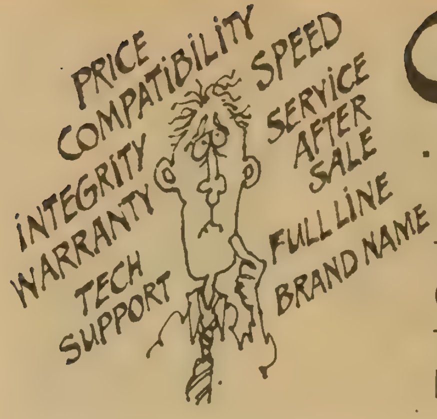

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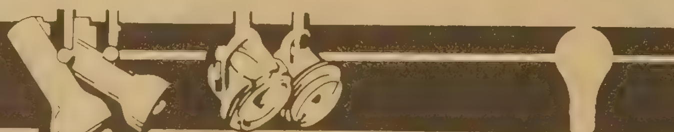

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California Educational Computing Consortium CCCE. For information write Herb Garrett, Long Beach City College, 4901 E. Carson Street, Long Beach, CA 90808.

Computer Professionals for Social Responsibility. Meetings: Most third Wed. 7:30 PM UCLA. CPSR/LS focuses on computer system risk and reliability and on privacy and civil liberties issues.

International Blind Users

Group (I-BUG). Part of the National Association of Blind and Visually Impaired Computer Users. Membership consists of access to CompuHelp, a 24 hour online database/bulletin board system, and receiving CompuHelp On-Disk, a modem database-bulletin board system on two double-sided disks. (916) 783-0364 or 645-8036.

L.A. Real-Time Problem Solvers. Meetings: 4th Saturdays, 10 AM to 1 PM. Hawthorne Public Library, 12700 S. Greviellea Ave., Hawthorne. We speak A/D, SBC, RISC, FORTH and C. We support real-time, real-world hardware and software problem solving, such as firmware, device drivers, instrumentation and very smart toasters. (213) 371-0589.

North Orange County Computer Club (NOCCC) Meetings: Monthly on Sunday, @ Chapman College near downtown Orange. Help for beginners, SIGs, educational activities, monthly newsletter. Open to any computer user. (714) 998-8080.

Realtor Microcomputer UG (RUG). Meetings: 4th Thurs. 7 PM Pasadena BOR, cnr. Orange Grove & Los Robles, Pasadena, CA.

USER GROUPS

AMIGA

Amiga Friends. Meetings: 3rd Sun. Rancho Santiago College, Rm R-124, 17th & Bristol, Santa Ana. Call for current meeting info: (714) 775-7237 (24 hrs.) or write: P.O. Box 4186, Huntington Beach, CA 92605.

Amiga Special Interest Group. Meetings: 1st Sunday except holidays. Chapman College, 333 N. Glassell, Orange, CA. Amiga SIG is part of the North Orange County Computer Club, a thousand member organization together 12 years.

Amiga Users Group of Long Beach. Meetings: 3rd Sun. 1-4 PM Mid-Cities Nat'l Bank, NE corner Lakewood & Artesian, Bellflower. We have a class that meets the second Sat of each month,1 to 4 pm. Something different every month.

Bits & Pieces Amiga Group of Anaheim. Meetings: each Tues. 6:30-10 PM 1130-A North Kraemer Blvd., Anaheim, CA. DOS Classes, tech. help & more. BBS: (714) 630-8897.

LAAUG-Los Angeles Amiga Users Group. Meeting: 3rd Wednesdays @ 7:30 PM. Veteran's Auditorium at Overland Ave. & Culver Blvd. Many SIGs, Rookie, music, video, monthly PD disks.

Pacific Computer Club. Meetings: 2nd Thurs. 7 PM 391 S. Madison, Pasadena, CA.

San Fernando Valley Amiga Users Group (SFVAUG). Meetings: 2nd Thursdays, 7 pm, American Legion Hall, 7338 Canby Ave.; Reseda. Call: Randy, (818) 719-9211.

South Bay Amiga Dudes. Meetings: 3rd Thursdays, 7 pm, Redondo Beach Blvd., Lawndale. Call: Charlie Breene at (213) 540-2834.

South Orange Commodore Klub (SOCK). Meetings: 3rd Saturday 9:00 A.M. Union Savings, 23688 El Toro Road, El Toro, CA. For Commodore 64/128 users and Amiga users. One-hour general meeting is followed by separate group meetings for each.

AMSTRAD

AMSTRAD User Group, U.S.A. Meetings: 4th Tues. 7 PM & 8 PM Venice High School, 13000 Venice Blvd. Since Sears dropped the PCW8256, group formed so users/owners can support each other.

Amstrad Users Club Of Orange County. Meetings: 3rd Saturdays, 10 am til 2 pm. Board Room upstairs in the Santa Ana Library, Civic Center & Ross streets. For more information call: (714) 953-6471.

APPLE

Apple/Valley Computer Club. Meetings: 2nd Wednesdays, 7:30 pm, Valley Presbyterian Hospital, meeting room #3. Discussion on Apple, Mac, Amiga, IBM. BBS: (818) 782-6471. Up loading/down loading. Visitors welcome. Eamon games, misc. Voice: (818) 988-1752.

Original Apple Corps. Meetings: 2nd Sun. 12:00 Noon 3rd Floor Community Room, Santa Monica Mall. First Apple group ever. SIGs for AppleWorks, Telecomm, Educators, Macintosh. Call Fred Duffy at (213) 396-5515.

Tri-City Apple Users Group. Meetings: 3rd Thurs., 7:00 PM, 50 N. Hill Ave., Pasedena. Call (818) 846-6682. Friendly Apple II experts.

ATARI

Atari Computer Association Of Orange County. Meetings: 2nd Sun. Rancho Santiago College, Room W101, Santa Ana. BBS: (714) 540-7378.

Pasadena Area Local Atari Computer Enthusiasts (PALACE). Atari 8-bit and ST support. Chris Roberts, (818) 359-1697, 220 N. Encinitas Ave., Monrovia, CA.

Santa Clara Valley Atari Computer Enthusiasts (SCVACE). Meetings: 1st Thurs. 7PM Mint Canyon Moose Lodge, 18000 W. Sierra Hwy, Canyon Country. 8-bit group. Atari ST special group now forming.

South Bay Atari Computer Enthusiasts (SBACE). Meetings: 2nd Tuesdays, 7:30 pm, Lomita VFW Hall, 1865 W. Lomita Blvd., Call: Alan, (213) 542-7870.

South Bay Atari ST Computer Club. Meetings: last Mon. 8 PM 15331 Praire Ave. Lawndale.

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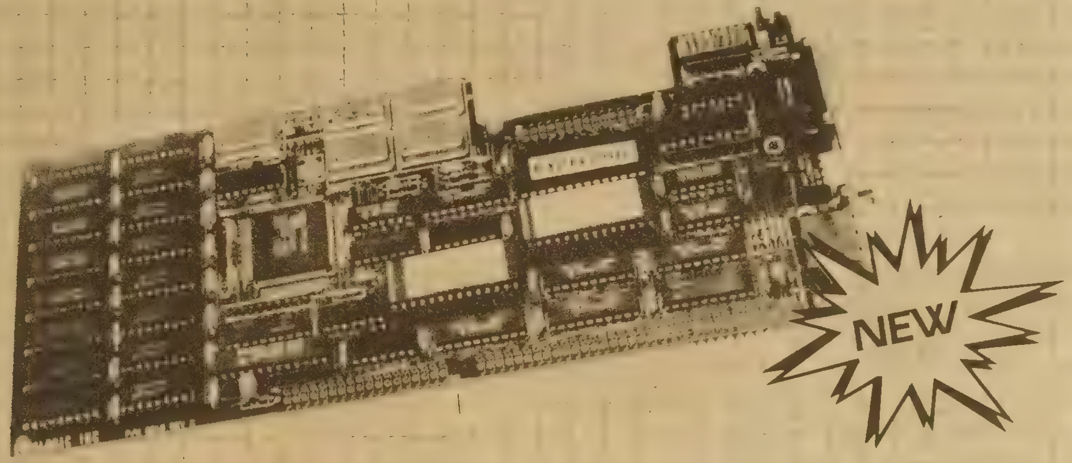

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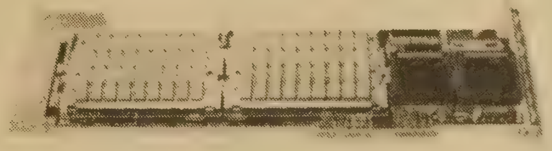

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Orange County Commodore Technical Users Group (C-TUG). Meetings: 4th Sun. 11:00 AM ,4th & Tustin, P.O. 1497, Costa Mesa, CA . 92628. Newsletter; 2 BBS's; door prizes; demos, raffles, speakers, (714)750-3003

Pacific Computer Club. Meetings: 2nd Thurs. 7 PM 391 S. Madison, Pasadena, CA.

Pasadena Commodore Computer Club. Meetings: 1st and 3rd Weds. 7:00 PM Circadian Room, Pasadena City College Cafeteria. Colorado Blvd & Hill, Pasadena. Call (818) 447-2212 after 2:30 PST or write P.O. Box 163, Arcadia, CA 91006.Supports C64 and 128 machines.

South California Commodore Users Group. Meetings: 3rd Tuesday each month, 7:00 P.M., MidCities National Bank, Lakewood and Artesia Blvds., Bellflower, CA.

South Orange Commodore Klub (SOCK). Meetings: 1st Wed. 7 PM Laventhol & Horwath, Exec. Conf. Rm.7th Fl., 3699 Wilshire Blvd., LA, CA.

dBASE

UCLA PCUG dBASE SIG. Meetings: 3rd Wednesdays, 7:30 pm. Call: (213) 874-7471.

Valley West dBASE Users Group. Meetings: 3rd Mon. 7:00 PM Blue Cross Of California, 21555 Oxnard St., Woodland Hills. Call (818) 343-9033 or write P.O. Box 16971, Encino, CA 91416.

DEC

DECUS Rainbow Pacific PC-LUG. Meetings: 2nd Wed. 7:00 PM Digital Equipment Corporation, 6101 W. Centinela, Ave., Culver City. Digital Equipment Computer Users Society. Free to DEC users. Call Karen Danforth (818) 787-8736 or write P.O. Box 2278, Van Nuys, CA 91404.

EPSON

San Fernando Valley Epson QX User Group. Meetings: 3rd Tues. 7 PM Fallbrook Sq. Comm. Rm., Fallbroook Mall, 6633 Fallbrook Ave. Canoga Park.

IBM AND COMPATIBLES

Calsonic PC Club. Meetings: 1st Tues. 5:15 PM 9 Holland, Irvine, CA.

Greater South Bay PC User's Group. Third Thursdays, @ 7 PM, Building behind Christ the King Lutheran Church, 2706 W. 182nd St. Torrance. Newsleter, BBS, more! Guests welcome. Call for more information. Evening: (213) 532-2123.

IBM & Compatibles Users Group-Ontario Area. For information call: (714) 982-1270.

Kenny's Computer Club. Meetings: Each Saturday 8:00 A.M. t133 Locust St. Apt. 19, Long Beach, CA. For those with an interest in graphics, DTP, Lotus, Autocad, games, databases and word processing.

Kern Independent User Group. Meetings: Write Kern Independent PC User Group, P.O. Box 2780, Bakersfield, CA 93303.

Long Beach IBM Users Group. Meetings: 3rd Tuesdays. 7 PM, Woodruff Medical Plaza, 3816 Woodruff Ave., Room A, Long Beach. Contact: Jim Wells. Call: (213) 439-7114.

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Pasadena IBM Users' Group. Meetings: 3rd. Wed. CalTech, Bridge Bldg., Rm. 201.

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Saddleback College IBM-PC Users Group. Meetings: 3rd Sat. Room 210, Business and General Science Building, Saddleback College, Mission Viejo. Call Susan Gordon at (714) 582-4650.

South Bay Users Group (SBUG). Meetings: 1st Sun. Mercury Savings, Long Beach, CA.

South County PC Users Group. Meetings: 3rd Sat. 9 AM Great American Savings, 23688 El Toro Rd., El Toro, CA.

Technical Users Group (TUG-NET). Meetings: Call for info (818) 882-6045. BBS (818) 882-6045.

The IBM & Compatibles User Group (ICUG). Meetings: 4th Thurs. 6:30 PM or 7:30 CAL Lutheran Univ., 60 W. Olsen Rd., Thousand Oaks. Group is 5 yrs. old & has 150 members Meetings begin at 6:30 for beginners, 7:30 regular members.

The Southern California K-Man Users Group. Meetings: 1st Wednesday, 7:00 P.M., Laventhol and Horwath, Executive Conference Room, 7th Floor, 3699 Wilshire Blvd., LA. Demo of the month features new software and hardware.

TRS Nybblers. Meetings: 1st Wed. 7 PM 2006 W. Magnolia, Burbank. Supports MS-DOS, CP/M, IBM or IBM clones.

Valley Computer Club—IBM. Meetings: 1st Wednesdays, 7 pm, Burbank Bd. of Realtors Bldg., 2006 W. Mangolia, Burbank. Call: Aaron.Epstein, (818) 769-1837.

VICUG (Valley IBM/Compatible Users Group). Meetings: 4th Fridays, 7:30 pm, Mercury Savings Bank, 14801 Ventura Blvd., Sherman Oaks.. Call: Harry Tischler, (818) 997-6000.

KAYPRO

OKOK Computer Users Group. Meetings: 2nd Wed. 7-9 PM Altadena Public Library, 600 E. Mariposa. Call (818) 794-3243. Serves, Osborne, Kaypro, Commodore C128, PCs and compatibles and both MS-DOS and C/PM operating systems.

LEADING EDGE

Leading Edge Computer User Group of Ventura County. Meetings: 2nd. Sat. 10 AM Camarillo Library, 3100 Ponderosa Dr., Camarillo, CA. Lectures on hard/floppy disk usage; program demos; beginner classes. Single: $20, couple $25.

MACINTOSH

California State University Macintosh Users Group. Meetings: California State University, Long Beach.

Conjo Ventura Macintosh Users Group, Inc. Meetings: 1st Thursdays, Thousand Oaks Public Library, 1401 E. Janss Road, Thousand Oaks. Call: Ed or Ellie Darling at (805) 584-8733.

LAMG (Los Angeles Macintosh Group). Meetings: Call (213) 278-LAMG or write 12021 Wilshire Blvd. #349, Los Angeles, CA 90025.

MacValley. Meetings: 3rd Tues. 7:30 PM Burbank High School Cafeteria at Burbank Blvd. and Third St. Call David Lagerson, (818) 998-5546or write P.O. Box 4279, Burbank, CA 91503.

Moreno Valley Macintosh Users Group (MVMUG). Product demos, newsletter, SIGS, BBS, more! For information about the club and meeting call: (714) 684-1337.

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SBAMUG (South Bay Apple Mac User Group) Meetings: Last Wednesday of each month, 7:30 PM, Ticor Title, 4240 Artesia Blvd., Torrance. Call (213) 316-7738.

South Coast Macintosh Users Group. Meetings: First Tuesdays, @ 7 PM, Goleta Library. Publishes a newsletter with reviews, offers advice, support for Mac users, discounts at local dealers. Call: Vince Leamons, 685-7295.

West Orange County Macintosh Users Group (WOCMUG). Meetings: Last Tuesday. F & M Bank in Rossmore Center, Orange County, CA.

NETWARE

Orange County Network Users Group (OCNET). Meetings: 2nd Tues. Wyle Labs, Irvine CA. Open to users, consultants, all interested in NETWARE. Call Mark at (714) 955-0616

Netware User Group Los Angeles (LOSNET). Meetings: 2nd. Wednesdays. Welcomes consultants, CPA's, dealers and users interested in sharing information on NETWARE and related products. Call Fane, (213) 452-1335. 2716 Ocean Park Blvd, Santa Monica 90405.

OPEN SYSTEMS

Open Systems Accounting, So. Cal Users Group (OSASCUG). Meetings: 4th Wed. Wyle Labs, Irvine, CA. Users of Open Systems, Altos Accountant, CADO, & Rexon accounting software. Open to end users, dealers and consultants. Call Mark at (714) 955-1724.

OSAS Systems Users Group Los Angeles (OSASUGLA). Meetings: 1st Wednesdays. Welcomes consultants, CPA's, dealers, users and QI's interested in sharing information on OSAS and related products. Call Fane, (213) 452-1335. 2716 Ocean Park Blvd., Santa Monica 90405.

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TANDY/RADIO SHACK

Los Angeles - Wilshire Color Computer Users' Group. Meetings: 2nd Sat. 12:30-5:30 PM Felipe de Neve Library's Comm. rm., 2820 W. 6th St., LA, CA.

South Bay Users Group (SBUG). Meetings: 3rd. Fri. Mercury Savings, 22939 Hawthorne Blvd., Torrance, CA.

TEXAS INSTRUMENTS

LA 99er Computer Group, 4th Wednesdays, August 24, Sept. 28, Oct. 26. @ 7:15 PM, Torrance Public Library, Torrance Blvd. @ Madronna. Call: Teresa Masters, (213) 271-6930.

San Fernando Valley TI-99/4A User Group. Meetings: 2nd Wed. 7:30 PM Doctor's Conf. Rm., Sherman Oaks Hospital, 4929 Van Nuys Blvd. Call for info: (818) 248-9558.

SFV 99ers. Write: 2823 Sanborne Ave., La Crecenta, CA 91214.

TI Professional. Call (213) 397-9668.

TI Users Group of Orange County. Meetings: 3rd Thurs. Peek Funeral Home, 7801 Bolsa Ave., Westminister. Call 633-7317.

TIMEX/SINCLAIR

Timex-Sinclair Users Group. Meetings: 3rd Mon. 7 PM 11828 Jefferson Blvd., Culver City, CA.

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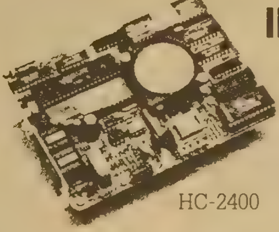
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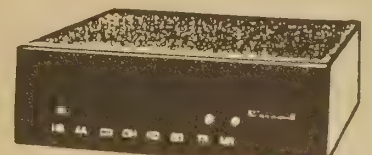
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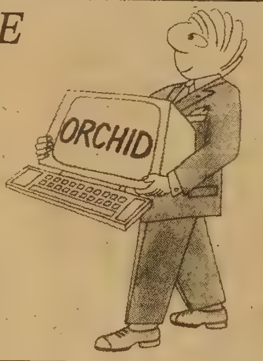

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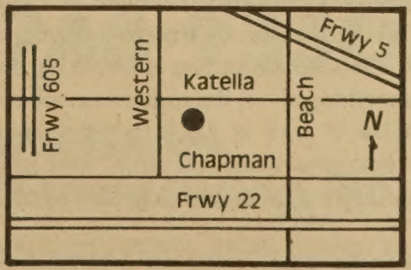

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DVORAK'S LAST COLUMN • BY JOHN C. DVORAK

A Glimpse Into The Future Or How Do Paulina And The Cosmetics Business Relate To The Real World?

It was as I thumbed through the pages of a slick mass-market magazine that it dawned on me. On page three was an Estee Lauder ad. It contained no information. There was no particular product to boost. The ad showed nothing except a photo of a familiar woman. It was the famous model, Paulina Porizkova. It was a two-page ad (black and white to match the shallow depth of the ad, and of Paulina, who appears regularly on the Letterman Show and irritates everyone with any sense—the woman seems vapid).

So there I am actually looking at this dumb ad. And now I'm writing about it. I was paralyzed. Stunned. Kudos to the ad agency.

But was the ad going to make me buy or even consider an Estee Lauder product ever in my life? Seems unlikely. It was one of those so-called institutional ads. These are ads designed to keep you aware of a brand name so that someday you'll have to make a choice between a whole bunch of identical products and you'll hopefully, according to ad theory, buy the one that has a name to which you've been most exposed.

This assumes that the exposure is a positive experience. If you're irritated by the ad, then the results may be different. Compare an Estee Lauder magazine ad with its well-composed picture of the beautiful Paulina to the irritating Levi's Docker TV ads, for example. This is the TV ad, you know, where a bunch of jerks talk nonstop about meaningless idiocies as the camera pictures their various behinds roaming around a room. I know someone who won't buy Levi's Dockers (ever!) because of these moronic ads.

So the overall pleasant experience, it's assumed, of eyeballing Paulina will somehow produce sales. (Magazine publishers will dream up any concept they can to sell ads. Good for them, they need the money more than Estee Lauder.)

Meanwhile, Paulina has a fat contract which brings her something like $280 million a year. Well, maybe a little less, but still a lot. So what does she do for this dough? Nothing. Nothing, that is, but look good. What kind of business is this? A bigger question that you're asking yourselves about now is: what the heck does this have to do with computers?

Well, let me tell you. I've thought about this ad because I knew that such a dopey ad reflected general societal trends. I imagine a book with the title *When Just Looking Good Is Enough*, by Cheryl Tiegs. The fact that these women make seven figures for doing little more than smiling and cocking their head says something about the importance of looking good. What it says is: Looking good means profits. And computer companies that "look good" make all the money. Window dressing pays big money.

I've always had a hangup with the preoccupation with so-called window dressing throughout my working life. It's not that I'm a slob or anything. I like tuxedos, in fact. It's that I spent my working years hating employers who thought that window dressing was important. They wanted you to look the part, play the role, pamper the public. I hated the idea. After all, there was real work to be done. Wasn't there?

Over the years I've concluded that the big believers in window dressing were right! Window dressing is critical to success. The only people who complain about it are the ones who are forced into performing the charade: the company workers who don't think it's important.

This brings us to the real question: how important is it?

We're dealing with the classic "form over function" argument that plagues various disciplines including literature, architecture, engineering, you name it. The successful software and hardware companies have revered window dressing in the form of image and packaging. Take Microsoft (please!). Microsoft has a few outstanding products and a lot of mediocre junkers. Just look at the Microsoft telecommunications program, *Access*, if you want to see a yawner. But it sells. Why? Microsoft is super successful because it's image-oriented. It's aware of the importance of window dressing. It's always been nutty about packaging although its image lacks the slick East Coast or Los Angeles patina. Microsoft has played around with its logo, including the recent addition of an inane notch. It's also played around with its packages starting with the ones which came in the clear plastic—always broken—box. Today it subscribes to the cereal box approach to packaging. You get a lot of air and Microsoft gets a lot of shelf space.

Borland has been nipping on the heels of the Microsoft theories with packages which looked like they came from Microsoft, but with less air and more books. Borland likes to sell lots of little books. Borland's earlier packages consisted of a cheap paperback book (aka documentation/instructions) that was cute and well done. They came with a disk and sold for $70. The image was the image of a good value. Nowadays Brady Books is producing a similar kind of package for even less money. *PC Magazine* via Bantam Books brought out the *DOS Power Tool Book* for $49.95 and they're selling like hot cakes. It's thick and the image is one of value.

Borland, the company that started this concept, has decided to eschew this money-making market and instead upgrade to the Microsoft league. Borland is now in the throes of a financial pinch. Fact is, the company was leading the way with the book-in-a-disk concept of marketing. The only other company that came close to the idea was Adam Osborne's Paperback Software. Paperback Software made the simple mistake of not providing a fat enough book.

> **I spent my working years hating employers who thought that window dressing was important. They wanted you to look the part, play the role, pamper the public. I hated the idea. After all, there was real work to be done.**

Both the book and disk market and the big box market require window dressing. Today the window dressing is simple for both: bulky bloated packages.

Exactly why the public has opted for bulky bloated fat packaging in many areas mystifies me. They want big boxes of soap, fat wordy novels, huge ad-filled magazines, BIG bags of potato chips, large software boxes. There are some exceptions and reversals to this trend, like the recent fad towards small footprint PC-AT clones, smaller disk drives, Japanese miniaturization in general. Even so, the Japanese desire to miniaturize runs into a brick wall with the American market. For years Americans have resisted the trend in high-fi audio toward the Japanese-designed mini-components in favor of the bulky man-sized monster amplifier. For the most part, bigger is better, when it comes to anything, especially software. Perhaps this is because things ethereal, like software, have to be exaggerated, blown out of proportion, and made whiz bang to catch on. Seems so.

If you think about the complex selling necessary to sell someone something as screwy as software, then you realize why this rigmarole is necessary. Let's face it, Estee Lauder has the same kind of challenge. It may be even harder for them since the idea is to sell as little as possible for as much money as possible. The super large box of air is not a good idea. Worse, the cosmetics business is built on a fashion that has lasted a long time, but one that might end any minute. There are plenty of societies where cosmetics aren't used.

Then again window dressing, by its nature, is cosmetics. So the cosmetic sales people should be the experts in selling this non-entity. If so, then their use of the captivating photo combined with nothing more than a logo might be the best ad layout for the high technology company too. Who needs information?

Gee, I can hardly wait until this becomes a trend. ■

John C. Dvorak graduated from the University of California. he is a contributing editor of PC magazine and MacUser, considered by many to epitomize the contrarian view of things—a charge that he vehemently denies. Dvorak's motto is: If you have nothing nice to say, then don't say anything at all.

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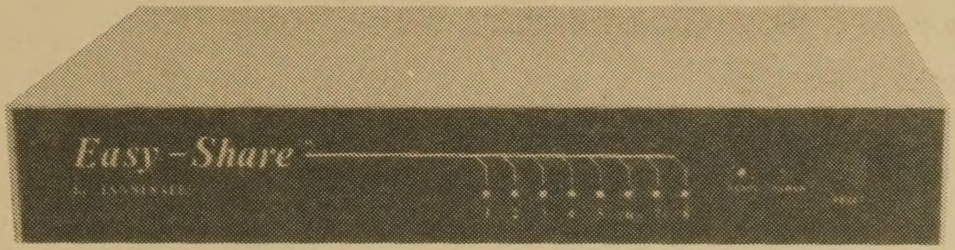

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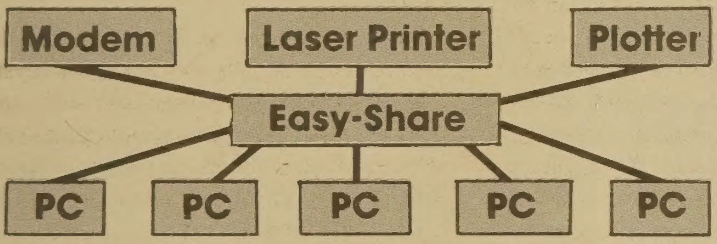

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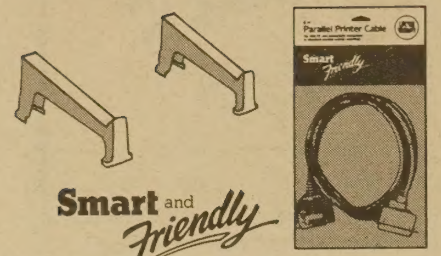

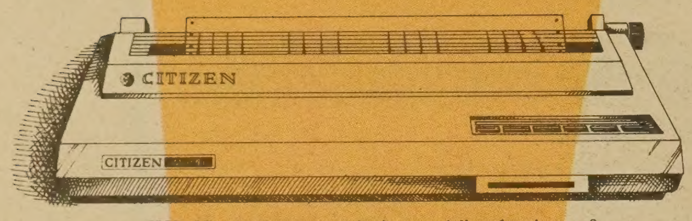

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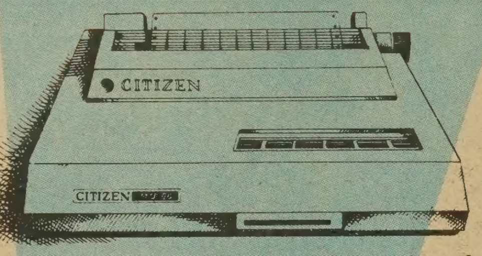

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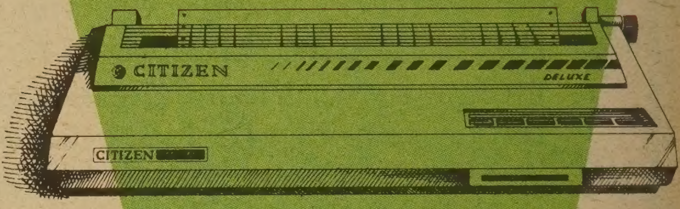

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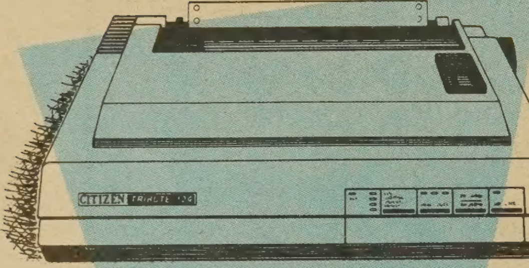

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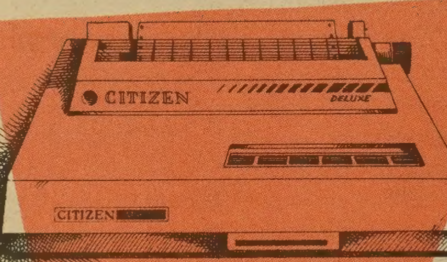

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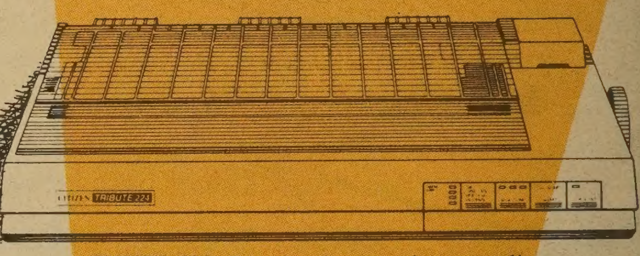

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